

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

GIRAFA.COM, INC.)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 07-787-SLR
)	
AMAZON WEB SERVICES LLC,)	JURY TRIAL DEMANDED
AMAZON.COM, INC., ALEXA INTERNET,)	
INC., IAC SEARCH & MEDIA, INC.,)	
SNAP TECHNOLOGIES, INC., YAHOO! INC.,)	
SMARTDEVIL INC., EXALEAD, INC., and)	
EXALEAD S.A.,)	
)	
Defendants.)	

**AMAZON WEB SERVICES LLC, AMAZON.COM, INC., AND ALEXA INTERNET,
INC.'S FIRST AMENDED ANSWER, DEFENSES, AND COUNTERCLAIMS
TO PLAINTIFF GIRAFA.COM, INC.'S COMPLAINT FOR PATENT INFRINGEMENT**

1. Amazon Web Services LLC ("AWS"); Amazon.com, Inc. ("Amazon.com"); and Alexa Internet, Inc. ("Alexa") (AWS, Amazon.com, and Alexa, collectively, "Amazon") by its undersigned counsel hereby answers Girafa.com, Inc.'s Complaint for Patent Infringement and Counterclaims for Declaratory Judgment of Non-Infringement and Invalidity as follows:

PARTIES

2. Admitted.
3. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.
4. Admitted.
5. Admitted.
6. Admitted.
7. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, and, on that basis, denies them.

8. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

9. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

10. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

11. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

12. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

JURISDICTION AND VENUE

13. Amazon admits that Girafa has brought a purported cause of action under the patent laws of the United States. Otherwise, denied.

14. Admitted.

15. AWS admits that it makes web services available via the website <http://developer.amazonwebservices.com> to individuals with access to the Internet, including in this district. Except as expressly admitted, AWS denies the remaining allegation.

16. Admitted.

17. Amazon.com admits that it makes web services available via the website <http://www.amazon.com> to individuals with access to the Internet, including in this district. Except as expressly admitted, Amazon.com denies the remaining allegation.

18. Admitted.

19. Alexa admits that it makes web services available via the website <http://www.alexa.com> to individuals with access to the Internet, including in this district. Except as expressly admitted, Alexa denies the remaining allegation.

20. Admitted.

21. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

22. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

23. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

24. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

25. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

26. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

27. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

28. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

29. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

30. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

31. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

BACKGROUND

32. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

33. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

34. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

35. Admitted.

36. Denied as to Amazon. Amazon is without sufficient information or belief to admit or deny the allegations of the remainder of this paragraph and, on that basis, denies them.

PATENT INFRINGEMENT

37. Amazon hereby incorporates its responses in paragraphs 1-36 above as though fully set forth at length.

38. Amazon is without sufficient information or belief to admit or deny the allegations of this paragraph and, on that basis, denies them.

39. Admitted with respect to Amazon. Amazon is without sufficient information or belief to admit or deny the allegations of the remainder of this paragraph and therefore denies them.

40. Amazon denies this paragraph in its entirety with respect to Amazon. Amazon is without sufficient information or belief to admit or deny the allegations of remainder of this paragraph and therefore denies them.

41. Amazon denies this paragraph in its entirety with respect to Amazon. Amazon is without sufficient information or belief to admit or deny the allegations of the remainder of this paragraph and therefore denies them.

42. Amazon denies this paragraph in its entirety with respect to Amazon. Amazon is without sufficient information or belief to admit or deny the allegations of the remainder of this paragraph and therefore denies them.

43. Amazon denies this paragraph in its entirety with respect to Amazon. Amazon is without sufficient information or belief to admit or deny the allegations of the remainder of this paragraph and therefore denies them.

44. Amazon denies this paragraph in its entirety with respect to Amazon. Amazon is without sufficient information or belief to admit or deny the allegations of the remainder of this paragraph and therefore denies them.

PRAYER FOR RELIEF

45. Amazon denies that Girafa is entitled to any relief, and specifically denies all of the allegations and prayers for relief contained in paragraphs a-g in Girafa's Prayer for Relief.

DEMAND FOR A JURY TRIAL

46. This paragraph states only a legal assertion, and thus, no response is required.

AMAZON'S DEFENSES

47. Amazon, without waiver, limitation, or prejudice, hereby asserts the following defenses:

FIRST DEFENSE

(Noninfringement)

48. Amazon does not and has not infringed any valid claim of the '904 patent literally, directly, contributorily, by way of inducement, and/or under the doctrine of equivalents.

SECOND DEFENSE

(Invalidity)

49. One or more claims of the '904 patent that are allegedly infringed by Amazon are invalid for failure to comply with one or more of the conditions of patentability set forth in Part II of Title 35 of the United States Code including, for example, Sections 102, 103, and/or 112.

THIRD DEFENSE

(Estoppel)

50. The claims of the '904 patent are and were limited by amendment, by the prior art and/or by the statements made during its prosecution before the USPTO, such that Girafa is now estopped and otherwise precluded from maintaining that such claims of the '904 patent are of sufficient scope to cover the accused products and methods, either literally or under the application of the doctrine of equivalents.

FOURTH DEFENSE

(Equitable Estoppel and/or laches)

51. Girafa's claims against Amazon with respect to the '904 patent are barred by equitable estoppel and/or laches.

FIFTH DEFENSE

(Inequitable Conduct)

52. The '904 patent is unenforceable due to inequitable conduct by persons with a duty of candor to the USPTO, including but not limited to, the named inventors, those in privity with the named inventors, entities associated with the '904 patent application (such as Plaintiff Girafa.com, Inc.) and the prosecuting attorneys (collectively, the "Applicants"). As stated in greater detail in Counterclaim III, during the prosecution of the '904 Patent, Applicants intentionally misrepresented material information to the USPTO and intentionally withheld material information from the USPTO with the intent to deceive.

RESERVATION OF DEFENSES

53. To the extent not already pled, Amazon reserves its right to add additional defenses pending further investigation and discovery.

COUNTERCLAIMS FOR DECLARATORY RELIEF

1. Counterclaimants Amazon Web Services LLC ("AWS"); Amazon.com, Inc. ("Amazon.com"); and Alexa Internet, Inc. ("Alexa") (AWS, Amazon.com, and Alexa, collectively, "Amazon") by its undersigned counsel hereby states its Counterclaims for Declaratory Relief:

PARTIES

2. Counterclaimant AWS is a limited liability company organized and existing under the laws of Delaware, having its principal place of business at 1200 12th Avenue South, Seattle, Washington 98144-2734.

3. Counterclaimant Amazon.com is a corporation organized and existing under the laws of Delaware, having its principal place of business at 1200 12th Avenue South, Seattle, Washington 98144-2734.

4. Counterclaimant Alexa is a corporation organized and existing under the laws of Delaware, having its principal place of business at Building 37 in the Presidio of San Francisco, San Francisco, CA 94129.

5. On information and belief, Counterclaimant Defendant Girafa.com, Inc. (“Girafa”) is a corporation organized and existing under the laws of Delaware, having its principal place of business at 1313 N. Market Street, Suite 5100, Wilmington, Delaware 19801 and at Twin Tower Two, 35 Jabotinsky Road, Suite 401, Ramat Gan, 52511, Israel.

JURISDICTION AND VENUE

6. On December 5, 2007 Girafa filed its Complaint alleging that Amazon and other defendants infringe U.S. Patent No. 6,864,904 (the “’904 patent”).

7. This Court has subject matter jurisdiction over Amazon’s counterclaims under the Declaratory Judgment Act, 28 U.S.C. §§ 2201-2202, and the patent laws of the United States, Title 35, United States Code, for which jurisdiction is based on 28 U.S.C. §§ 1331 and 1338(a).

8. By filing its Complaint, Girafa has consented to the personal jurisdiction of this Court.

9. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391 and 1400.

10. Girafa, by its Complaint, has asserted and continues to assert that Amazon is infringing the ’904 patent. Amazon, by its Answer, has asserted and continues to assert that it does not infringe the ’904 patent and that the ’904 patent is invalid. Thus, an actual, justiciable

controversy exists between Girafa and Amazon concerning the infringement and validity of the '904 patent.

COUNTERCLAIM I

(Declaration of Noninfringement)

11. Amazon incorporates by reference each and every allegation contained in paragraphs 1-10 of its Counterclaim as though set forth at length.

12. Amazon does not and has not infringed any valid claim of the '904 patent literally, directly, contributorily, by way of inducement, and/or under the doctrine of equivalents.

13. Pursuant to Federal Rule of Civil Procedure 57 and 28 U.S.C. §§ 2201-2202, Amazon is entitled to a declaratory judgment that it does not and has not infringed the '904 patent.

COUNTERCLAIM II

(Declaration of Invalidity)

14. Amazon incorporates by reference each and every allegation contained in paragraphs 1-13 of its Counterclaim as though set forth at length.

15. One or more claims of the '904 patent that are allegedly infringed by Amazon are invalid for failure to comply with one or more of the conditions of patentability set forth in Part II of Title 35 of the United States Code including, for example, Sections 102, 103, and/or 112.

16. Pursuant to Federal Rule of Civil Procedure 57 and 28 U.S.C. §§ 2201-2202, Amazon is entitled to a declaratory judgment that one or more claims of the '904 patent are invalid.

COUNTERCLAIM III

(Declaration of Unenforceability Due to Inequitable Conduct)

Misrepresentation

17. Amazon incorporates by reference each and every allegation contained in paragraphs 1-16 of its Counterclaim as though set forth at length.

18. The '904 patent is unenforceable due to inequitable conduct by the Applicants.

19. In a March 11, 2004 Office Action (Ex. A, 55, 59-60), the Examiner rejected a number of claims of the Girafa application on obviousness grounds, based in part on United States Patent No. 6,613,100 to Miller.

20. The Examiner found that one reference (United States Patent No. 6,665,838 to Brown) did not disclose thumbnail visual images of home pages, but determined, regarding Miller, that "it is clear that the web page is referring to the main page or home page." Ex. A, 60.

21. An interview between the Applicants and the Examiner took place on June 3, 2004, in which Miller was specifically discussed. Ex. A, 60-69, 88-89. To avoid what it suggested were the disclosures of Miller, the Applicants amended a number of its claims to restrict "thumbnail visual image" to the "home page" of a given web site. Ex. A, 74, 96 (claim 1) and 77-78, 99-100 (claim 21).

22. The specific misconduct alleged occurred in the following remarks made by the Applicants following the amendment of its claims, which misrepresented Miller:

While the applicant agrees that Miller teaches displaying thumbnails of documents, the applicant respectfully submits that Miller displays thumbnails of linked pages and does not show or suggest displaying thumbnails of the home pages of the linked pages, as recited in amended claims 1 and 21. Neither Brown nor Miller show or suggest "providing to a user a visual image of a web page containing at least one hyperlink and at least partially concurrently providing a thumbnail visual image of the home page

of at least one web site which is represented by said at least one hyperlink” as recited in amended claims 1 and 21.

Ex. A, 88 and 110.

23. Based at least in part on the above misrepresentation, Girafa’s patent was allowed.

Ex. A, 115.

24. Contrary to the Applicants’ representations to the Patent and Trademark Office, however, Miller does suggest thumbnail visual images of a home page. *See, e.g.*, Ex. B, Col.

8:12-18:

The thumbnails 270 appearing on each of the selection panels 220-250 of the GUI 200 could be representative of alternative web pages for selections by the user. (i.e., the thumbnail 270 is a miniaturized picture of the actual web page that it represents). Each thumbnail 270 is essentially a “link” to an alternative web page, and, when selected by the user, causes the web browser 100 to display the selected web page on the web browser’s display section.

25. Miller, at Col. 8, also includes a chart that references to “CHILDREN” links (contemplating “alternative web pages” having a parent-child relationship).

26. The logical implication of the parent-child language in Miller is using thumbnail visual images of a home page (parent) as well as a linked-to web page (child).

27. The Applicants did not deal in candor, good faith, and honesty with the Patent Office in discussing the Miller reference, and in failing to do so, the Applicants created a basis for patentability where none existed.

28. The Applicants therefore committed inequitable conduct during the prosecution of the ‘904 Patent, rendering it unenforceable, by misrepresenting material information with an intent to deceive.

Withheld Prior Art

29. The Applicants included in the Background of the Invention section of the '904 patent, filed on November 8, 2000, a list of the following patents, referenced only by number: U.S. Patent Nos. 6,011,537 to Slotznick, 6,016,494 to Isensee et al., 5,973,692 to Knowlton et al., and 6,101,510 to Stone et al. (collectively, the "Withheld Prior Art").

30. The Applicants failed to disclose any of the Withheld Prior Art to the examiner on the required Information Disclosure Statement form, PTO-1449, ("IDS") at any time prior to or since the issuance of the '904 patent.

31. The Applicants filed a continuation of the '904 patent application, U.S. Patent Application No. 11/029,995, (the "Continuation Application"), on January 5, 2005. The Continuation Application contained a Background of the Invention section containing references identical to those in the same section of the '904 patent application.

32. The Applicants disclosed the Withheld Prior Art during prosecution of the Continuation Application in a January 5, 2005 IDS. .

33. The Applicants did not deal in candor, good faith, and honesty with the Patent Office by failing to adequately disclose the Withheld Prior Art for consideration by the Examiner during prosecution of the '904 patent application despite having knowledge that such disclosure was required, as evidenced by their disclosure of the Withheld Prior Art during prosecution of the co-pending Continuation Application. By failing to do so, the Applicants avoided rejections based on material prior art and created a basis for patentability where none existed.

34. The Applicants therefore committed inequitable conduct during the prosecution of the '904 Patent, rendering it unenforceable, by withholding material information with an intent to deceive.

35. Pursuant to Federal Rule of Civil Procedure 57 and 28 U.S.C. §§ 2201-2202, Amazon is entitled to a declaratory judgment that one or more claims of the '904 patent are unenforceable due to inequitable conduct.

PRAYER FOR RELIEF

WHEREFORE, Amazon prays for relief as follows:

- a) That the Court enter judgment in favor of Amazon and against Girafa on Amazon's Counterclaims;
- b) That the Court enter judgment in favor of Amazon and against Girafa on Girafa's claims against Amazon for patent infringement;
- c) That Amazon be found not to infringe the '904 patent;
- d) That the '904 patent be found invalid and unenforceable;
- e) That the Court find this case exceptional and order Girafa to pay Amazon its costs and attorney's fees; and
- f) That the Court grant such other relief as the Court deems just and proper under these circumstances.

POTTER ANDERSON & CORROON LLP

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-and-

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Dated: July 2, 2008
872543 / 32639

EXHIBIT A

345 760

CLASS SUBCLASS ISSUE CLASSIFICATION

PATENT NUMBER
6864904

U.S. UTILITY Patent Application

O.I.P.E. M.H. 2 10
SCANNED D.A.

PATENT DATE
MAR 08 2005

APPLICATION NO. 09/708191 CONT/PRIOR CLASS 345 SUBCLASS 581 760 ART UNIT 2872 2076 EXAMINER

APPLICANTS
Shirley R. Rahn
Eldad Barneon
Yuval Yaron



TITLE
Framework for providing visual context to new links

PTO-2048
12/05

ISSUING CLASSIFICATION							
ORIGINAL		CROSS REFERENCE(S)					
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
345	760	345	744	763	838		
INTERNATIONAL CLASSIFICATION							
6/08/6	5/00						

☐ Continued on Issue Slip inside File Jacket

Formal Drawings (11 sheets) set L 11-8-00

<input type="checkbox"/> TERMINAL DISCLAIMER	DRAWINGS			CLAIMS ALLOWED	
	Sheets Drwg.	Figs. Drwg.	Print Fig.	Total Claims	Print Claim for O.G.
	11	11	1	50	1
<input type="checkbox"/> The term of this patent subsequent to _____ (date) has been disclaimed.	 (Assistant Examiner)			NOTICE OF ALLOWANCE MAILED	
<input type="checkbox"/> The term of this patent shall not extend beyond the expiration date of U.S. Patent No. _____	 MATTHEW C. BELL SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2800 (Primary Examiner)			9-21-04 ISSUE FEE Amount Due Date Paid \$ 665 12-28-04	
<input type="checkbox"/> The terminal _____ months of this patent have been disclaimed.	(Legal Instrument Examiner) (Date)			ISSUE BATCH NUMBER	

WARNING:
The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 181 and 268. Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.

Form PTO-436A
(Rev. 8-02)

ISSUE FEE IN FILE

FILED WITH: ☐ DISK (CRF) ☐ FICHE ☐ CD-ROM
(Attached in pocket on right inside flap)

Page 1 of



UNITED STATES PATENT AND TRADEMARK OFFICE

 COMMISSIONER FOR PATENTS
 UNITED STATES PATENT AND TRADEMARK OFFICE
 WASHINGTON, D.C. 20231
 www.uspto.gov


Bib Data Sheet

CONFIRMATION NO. 1297

SERIAL NUMBER 09/708,191	FILING DATE 11/08/2000 RULE	CLASS 345	GROUP ART UNIT 2672	ATTORNEY DOCKET NO. U 0130473	
APPLICANTS Shiri Ran, Savion, ISRAEL; Eidad Baroon, Tel Aviv, ISRAEL; Yuval Yarom, Ra'anana, ISRAEL;					
** CONTINUING DATA ***** THIS APPLN CLAIMS BENEFIT OF 80/169,326 12/08/1999					
** FOREIGN APPLICATIONS *****					
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 03/13/2001					
** SMALL ENTITY **					
Foreign Priority claimed <input type="checkbox"/> yes <input checked="" type="checkbox"/> no 35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Mat. after		STATE OR COUNTRY ISRAEL	SHEETS DRAWING 11	TOTAL CLAIMS 40	INDEPENDENT CLAIMS 4
Verified and Acknowledged Examiner's Signature <i>[Signature]</i> Initials <i>03-20-03</i>					
ADDRESS Ledes & Perry 20 West 81st Street New York, NY 10023					
TITLE Framework for providing visual context to www hyperlinks					
FILING FEE RECEIVED 840	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input checked="" type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other <input type="checkbox"/> Credit		

Practitioner's Docket No. U 013047-3

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Shirli RAN et al.

For: A FRAMEWORK FOR PROVIDING VISUAL CONTEXT TO WWW
HYPERLINKS

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

PRELIMINARY AMENDMENT

Please amend the above identified application as follows:

IN THE SPECIFICATION:

Page 1, line 1, before "FIELD" insert a paragraph - The material on the compact

discs labeled COPY 1 and COPY 2 is incorporated by reference. The compact discs are
identified in the LIST OF APPENDICES below. —

Respectfully submitted,



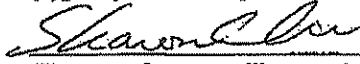
JULIAN H. COHEN
LADAS & PARRY
26 WEST 61ST STREET
NEW YORK, NEW YORK 10023
REG.NO.20,302 (212)708-1887

CERTIFICATE UNDER 37 1.10

I hereby certify that this paper is being deposited with the United States Postal Service on this date NOVEMBER 8, 2000 in an envelope as "EXPRESS MAIL POST OFFICE TO ADDRESSEE" Mailing Label Number EL69973267IUS addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231

SHARON CHU

(Type or print name of person mailing paper)



(Signature of person mailing paper)

NOTE: Each paper or fee referred to as enclosed herein has the number of the "EXPRESS MAIL" mailing label place thereon prior to mailing 37 CFR 1.16(b).

In Re: U.S.S.N. 09/708,191
Group Art Unit 2697

REMARKS

Applicants express their appreciation to Examiner Chen for the courtesy of an interview which was granted to Applicant's representative, Sanford T. Colb (Reg. No. 26,856). The interview was held in the USPTO on July 2, 2002. The substance of the interview is set forth in the Interview Summary.

The application contains four independent claims, claims 1, 14, 21 and 34. Claim 1 is directed to a method for presenting Internet information to a user. Claim 14 is directed to a method for generating a web page image database. Claim 21 is directed to a system for presenting Internet information to a user. Claim 34 is directed to a system for generating a web page image database.

Rejection Under 35 U.S.C. §102(e)

Claims 1 and 21 stand rejected as anticipated by Scarborough, US 6,353,448, under 35 U.S.C. §102(e). The filing date of Scarborough is May 16, 2000. As indicated in the inventors' declaration and as now indicated in the specification as well, the present application claims priority from a provisional application, USSN 60/169,328, filed December 6, 1999 (hereinafter "the Provisional"). The Provisional supports, *inter alia*, claims 1 and 21 of the present application. Claim 1 reads,

"1. A method for presenting Internet information to a user comprising:
providing to a user a visual image of a web page containing at least one hyperlink;
and at least partially concurrently
providing a visual image of another web page of at least one web site which is
represented by said at least one hyperlink."

The Provisional states (7 lines from the bottom of page 1):

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"When a client needs an image to show with a link to a web page, it sends the URL to a translation engine, which processes the URL and finds the key of the image that describes the page. The image is then retrieved from the database, and displayed to the user. The images in the database are 'thumbnails' of home pages of WWW web sites."

And on page 2 (first bullet point):

"Many web sites have links to related web sites. These web sites can retrieve the images and use them as part of the description of the link."

See also the picture on page 2 of the Provisional, in which a list of hyperlinks on the right-hand side of picture, e.g. the link to "Adrenalin Entertainment", are accompanied by pictures in the left-hand side of the picture, e.g. the homepage of Adrenalin Entertainment.

Thus the Provisional describes the method claimed in claim 1.

With respect to claim 21, the Examiner does not distinguish claim 21 from claim 1: at page 5, paragraph 9 of the Official Action, the Examiner states, "Regarding claims 21, 23-27 and 29, the statement presented, above, with respect to claims 1, 3-7 and 9 are incorporated herein". Claim 21 reads as follows:

21. A system for presenting Internet information to a user comprising:
first functionality providing to a user a visual image of a web page containing at least one hyperlink; and
second functionality operative at least partially concurrently with said first functionality for providing a visual image of another web page of at least one web site which is represented by said at least one hyperlink.

The above-quoted passages from the Provisional show that the Provisional discloses a system having a first and second functionalities as recited in claim 21.

In Re: U.S.S.N. 09/708,191
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Rejection Under 35 U.S.C. 103/102(e)

Claims 14 and 34 stand rejected as obvious in view of the combination of Scarborough and Thomas, US 6,401,118. Claim 14 reads as follows (letters a-e added for ease of reference):

14. A method for generating a web page image database, the method comprising:
- (a) receiving a list of URLs corresponding to web pages, the images of which it is desired to download into an image database;
 - (b) operating a multiplicity of downloaders simultaneously by supplying to each downloader one URL at a time;
 - (c) causing each downloader to retrieve from the Internet, a web page and embedded objects corresponding to the URL supplied to it;
 - (d) causing a thumbnail generator to render the web page; and
 - (e) causing said thumbnail generator to shrink said rendered image of the web page and supply it to the downloader.

The Examiner states that (a), (c), (d) and (e) are known from Scarborough, and that (b) is known from Thomas. Applicant disagrees that (a), (c), (d) and (e) are taught in Scarborough. However, if one believes that (a), (c), (d) and (e) are described Scarborough, then one must also conclude that (a), (c), (d) and (e) are described in the Provisional:

With respect to (a), on page 1, the Provisional says that "WWW services that automatically create pages (e.g. search engines, related links services, etc.) usually put the page title as the description of a link, and sometimes put some text from the page as a detailed description...A crawler scans the internet, and collects images of home pages." Inherent in this description is receiving a list of URLs corresponding to web pages, the images of which it is desired to download into an image database—by crawling, which is a form of searching, a list of hyperlinks is received.

With respect to (c), (d), (e), the Provisional states (top of page 1): "The crawler scans the Internet, creating images of Internet pages, and storing them in a database", and (bottom of page 1)

In Re: U.S.S.N. 09/708,191
Group Art Unit 2697

"The images in the database are 'thumbnails' of home pages of WWW web sites. A crawler scans the internet, and collects images of home pages. These images are then stored in the database." Inherent in this description is causing each downloader to retrieve from the Internet, a web page and embedded objects corresponding to the URL supplied to it; causing a thumbnail generator to render the web page; and causing said thumbnail generator to shrink said rendered image of the web page and supply it to the downloader. Also, to paraphrase the Examiner, even if it is argued that the Provisional does not disclose a downloader, one of ordinary skill in the art would have understood that when the crawler sends request to a remote server and receives web pages, the crawler functions as a downloader to download the web page from a remote server.

Thus (a), (c), (d) and (e) are described in the Provisional, and therefore Scarborough is not available as a reference to show (a), (c), (d) and (e). Since the Examiner determined that claim 14 is obvious in view of the combination of Scarborough and Thomas, without the Scarborough reference claim 14 is not obvious in view of the prior art.

Regarding claim 34, this claim reads,

34. A system for generating a web page image database, the system comprising:
at least one downloader receiving one URL at a time and retrieving from the Internet a web page and embedded objects corresponding to the URL received by it; and
at least one thumbnail generator operative to render the web page, shrink said rendered image of the web page and supply said rendered image to the downloader.

In paragraph 24 at page 12, the Examiner states, "Regarding claims 34-37, the statement presented, above, with respect to claims 14-17 are incorporated herein." Thus the above arguments regarding claim 14 are equally applicable to claim 34.

Rejections Under 35 U.S.C. §112: first paragraph

In Re: U.S.S.N. 09/708,191
Group Art Unit 2697

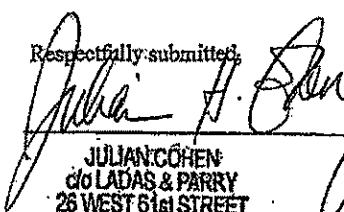
The Examiner rejects claims 13 and 33 under 35 U.S.C. §112, first paragraph, stating that "trimming a path component" is insufficiently described in the specification. This rejection is inappropriate. A detailed example of path trimming is described in Fig. 5 and the accompanying text at the bottom of page 10 through page 11.

Dependent Claims

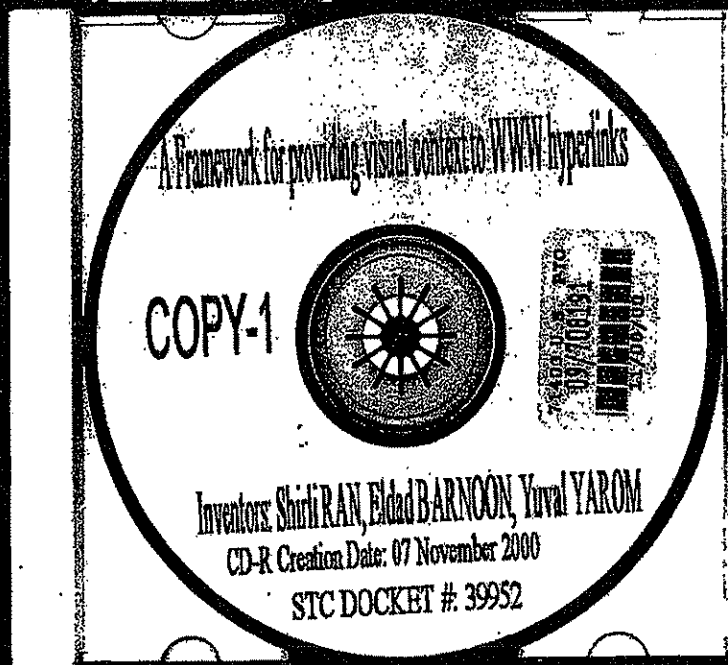
In view of the foregoing remarks, Scarborough is no longer available as a reference, and therefore independent claims 1, 14, 21 and 34 are believed to be allowable. As each of claims 2-13, 15-20, 22-33, and 35-40 depends directly or indirectly from one of allowable claims 1, 14, 21 and 34, claims 2-13, 15-20, 22-33, and 35-40 are also allowable.

In view of the foregoing amendments and remarks, all of the claims are believed to be allowable. Favorable consideration and allowance of the application are respectfully requested.

Respectfully submitted,


JULIAN COHEN
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 Reg No 30086





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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,191	11/08/2000	Shih-H Ren	U 013047-3	1297

7594

04/02/2003

Ladas & Parry
 26 West 61st Street
 New York, NY 10023

EXAMINER

CHEN, PO WEI

ART UNIT

PAPER NUMBER

2097

DATE MAILED: 04/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.	Applicant(s)	
	08/708,181	RAN ET AL	
	Examiner	Art Unit	
	Po-Wai (Dennis) Chen	2697	

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-40 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-40 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(a) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-848)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-162)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .	6) <input type="checkbox"/> Other:

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DETAILED ACTION

Claims 1-40 are pending in this application. Claims 1, 14, 21, and 34 are independent claims.

This action is non-final

The present title of the invention is "Framework for Providing Visual Context to WWW Hyperlinks".

The Group Art Unit of the Examiner case is now 2697. Please use the proper Art Unit number to help us serve you better.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1, 3-7, 9, 21, 23-27, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Scarborough et al. (US 6,353,448; refer to as Scarborough herein).

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2. Regarding claim 1, Scarborough discloses a graphic user interface display method comprising:

A method for presenting Internet information to a user ("providing a method of displaying graphic user interface layouts...the data repository may be located on a local area network ('LAN'). However, in most cases it will be located on a global wide area network (i.e., the Internet)", see lines 39-50 of column 4).

Providing to a user a visual image of a web page containing at least one hyperlink; and at least partially concurrently providing a visual image of another web page of at least one web site which is represented by said at least one hyperlink. ("In FIG. 8, book-marked websites are not only displayed as linked text, but also as image displays 380 of the graphic user interface of the corresponding website", see lines 58-67 of column 4 and lines 43-45 of column 10 and Fig. 4 and 8).

3. Regarding claim 3, Scarborough discloses a graphic user interface display method comprising:

The visual image of said another web page is displayed within the visual image of said web page ("In FIG. 8, book-marked websites are not only displayed as linked text, but also as image displays 380 of the graphic user interface of the corresponding website", see lines 58-67 of column 4 and lines 43-45 of column 10 and Fig. 4 and 8).

4. Regarding claim 4, Scarborough discloses a graphic user interface display method comprising:

Visual images of a plurality of other web pages represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one

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hyperlink ("FIG. 4 illustrates an exemplary screen display of search results as displayed on the end-user interface 120. At least one or more displayed bitmap images 230 are presented to the end-user along with the traditional text information of the prior art search engines", see lines 58-67 of column 4 and lines 61-65 of column 9 and Fig. 4 and 8).

5. Regarding claim 5, Scarborough discloses a graphic user interface display method comprising:

Web page comprises an HTML page ("The instruction set is typically the notoriously well known hypertext markup language", see lines 43-45 of column 4)

6. Regarding claim 6, Scarborough discloses a graphic user interface display method comprising:

Employing a web browser including visualization functionality which interfaces via the Internet with an image server ("an end-user browser 120 sends a search request 130 to a search engine server 135...the search engine server 135 performs an image request 140 to an image processor 150...The image processor 150 sends a request 160 to the data depository 80 in much the same way in which the end-user interface could directly send a request" and "FIG. 5 illustrates an exemplary screen display of an end-user configuration screen for adjusting color depth and image display resolution", see lines 24-48 of column 9, lines 66-67 of column 9 and lines 1 of column 10 and Fig. 3, 5, 6, and 7).

7. Regarding claim 7, Scarborough discloses a graphic user interface display method comprising:

Visualization functionality is operative to download via the image server from an image database images of web pages which are referenced in hyperlinks contained in the web page and

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to provide to a user, via the web browser, an annotated web page ("an end-user browser 120 sends a search request 130 to a search engine server 135...upon resolving at least one or more target data depositories 80 to present to the user, the search engine server 135 first performs a cache query 210 to an image cache 200", see lines 24-39 and lines 61-65 of column 9 and Fig. 3 and 4).

8. Regarding claim 9, Scarborough discloses a graphic user interface display method comprising:

Employing a web browser which interfaces via the Internet with a web server including visualization functionality ("an end-user browser 120 sends a search request 130 to a search engine server 135...the search engine server 135 performs an image request 140 to an image processor 150...The image processor 150 sends a request 160 to the data depository 80 in much the same way in which the end-user interface could directly send a request" and "FIG. 5 illustrates an exemplary screen display of an end-user configuration screen for adjusting color depth and image display resolution", see lines 48-50 of column 4, lines 24-48 of column 9, lines 66-67 of column 9 and lines 1 of column 10 and Fig. 3, 5, 6, and 7).

9. Regarding claims 21, 23-27 and 29, the statement presented, above, with respect to claim 1, 3-7 and 9 are incorporated herein.

Claim Rejections: 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2, 8, 10, 11, 22, 28, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarborough et al. (US 6,353,448; refer to as Scarborough herein).
12. Regarding claim 2, Scarborough discloses a graphic user interface display method comprising:

Visual image of said another web page is displayed alongside the visual image of said web page ("FIG. 4 illustrates an exemplary screen display of search results as displayed on the end-user interface 120. At least one or more displayed bitmap images 230 are presented to the end-user along with the traditional text information of the prior art search engines", see lines 58-67 of column 4 and lines 61-65 of column 9 and Fig. 4 and 8). It is further noted that while claim discloses that the visual image of another web page is displayed alongside instead of top and bottom as disclosed by Scarborough. However, it would have been obvious to one ordinary skill in the art at the time of invention to understand that the locations of images is a matter of design choices of the web page developer.

13. Regarding claim 8, Scarborough discloses a graphic user interface display method comprising:

Annotated web page includes the web page having alongside it images of homepages linked with the web page ("FIG. 4 illustrates an exemplary screen display of search results as displayed on the end-user interface 120. At least one or more displayed bitmap images 230 are presented to the end-user along with the traditional text information of the prior art search engines", see lines 58-67 of column 4 and lines 61-65 of column 9 and Fig. 4 and 8. Also see

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32-51 of column 2). It is further noted that while claim discloses that the visual image of another web page is displayed alongside instead of within the web page as disclosed by Scarborough. However, it would have been obvious to one ordinary skill in the art at the time of invention to understand that the locations of images is a matter of design choice of the web page developer.

14. Regarding claim 10, Scarborough discloses a graphic user interface display method comprising:

A method according to claim 9 and wherein said visualization functionality is operative to embed commands to the web browser to download, via an image server, images of web pages which are referenced in hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page ("an end-user browser 120 sends a search request 130 to a search engine server 135...the search engine server 135 performs an image request 140 to an image processor 150...The image processor 150 sends a request 160 to the data depository 80 in much the same way in which the end-user interface could directly send a request", see lines 24-48 of column 9 and Fig. 3). It is noted that while claim discloses that the visualization functionality is operative to embed commands to the web browser to download via an image server and Scarborough discloses a search engine server to perform the same. It would have been obvious to one of ordinary skill in the art to understand that by having the commands at the browser or the server would have the same functionality. It would have been a matter of design choice.

- 15. Regarding claim 11, Scarborough discloses a graphic user interface display method comprising:

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Annotated web page includes the web page having within it images of homepages linked with the web page ("FIG. 4 illustrates an exemplary screen display of search results as displayed on the end-user interface 120. At least one or more displayed bitmap images 230 are presented to the end-user along with the traditional text information of the prior art search engines"; see lines 58-67 of column 4 and lines 61-65 of column 9 and Fig. 4 and 8. Also see 32-51 of column 2).

16. Regarding claims 22, 28, 30, and 31, the statement presented, above, with respect to claims 2, 8, 10, and 11 are incorporated herein.

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scarborough et al. (US 6,353,448; refer to as Scarborough herein) as applied to claim 1 above, and further in view of Weinberg et al. (US 6,144,962; refer to as Weinberg herein) and Mighdoll et al. (US 6,073,168; refer to as Mighdoll herein).

18. Regarding claim 12, Scarborough discloses a graphic user interface display method comprising:

Generation of a list of hyperlinks from a web page ("an end-user browser 120 sends a search request 130 to a search engine server 135"; see lines 24-26 and Fig. 3 and 4; It is noted that by searching, a list of results or hyperlinks are generated);

Visualizing hyperlinks ("The data repository 80 sends back text and image data 170 to the image processor which, in turn, renders 90 the same graphic user interface layout that would be displayed on the end-user interface"; see lines 24-60 of column 9; It is noted that each result or hyperlink is visualized into an image).

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It is noted that Scarborough does not disclose elimination of links which refer back to a web server sending said web page. However, this is known in the art taught by Weinberg. Weinberg teaches a visualization of web sites that "The left-hand and right-hand location filters 51 filter out local URLs and external URLs, respectively, based on the domain names of the URLs" (see lines 36-39 of column 16; It is noted that while claim recites links which refer back to a web server sending said web page, it would have been obvious to one of ordinary skill in the art to realize local links refer the same). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Weinberg to eliminate local links to generate the results from the internet without information from own search engine.

It is noted that Scarborough does not disclose determination of whether redirection links are present. However, this is known in the art taught by Mighdoll. Mighdoll teaches that "for every Web page that is retrieved from a remote server 4, any or all of the following data are stored in the document database 61...11) whether the Web page has been redirected to another remote server 4; 12) redirect address (if appropriate)", see lines 20-44 of column 6). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Himmel of determine whether redirection links are present to provide the user with a web page that has been redirected instead of the redirecting page.

19. Regarding claim 32, the statement presented, above, with respect to claim 12 is incorporated herein.

20. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarborough et al. (US 6,353,448; refer to as Scarborough herein) as applied to claim 1 above, and further in view of Thomas (US 6,401,118).

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21. Regarding claim 14, Scarborough discloses a graphic user interface display method comprising:

A method for generating a web page image database ("the bitmap image 100 is stored in the image cache 200", see lines 24-60 of column 9 and Fig. 3).

Receiving a list of URLs corresponding to web pages, the images of which it is desired to download into an image database ("an end-user browser 120 sends a search request 130 to a search engine server 135", see lines 24-60 of column 9 and Fig. 3 and 4; It is noted that by searching, a list of results or hyperlinks are received).

Causing downloader to retrieve from the Internet, a web page and embedded objects corresponding to the URL supplied to it; causing a thumbnail generator to render the web page; causing said thumbnail generator to shrink said rendered image of the web page and supply it to the downloader ("The data repository 80 sends back text and image data 170 to the image processor which, in turn, renders 90 the same graphic user interface layout that would be displayed on the end-user interface is then reduced to a bitmap image 100", see lines 24-60 of column 9 and Fig. 2, 3, and 4). It is further noted that while Scarborough does not disclose a downloader, however, it would have been obvious to one of ordinary skill in the art to understand that when the search engine sends a request to a remote server and receiving web pages, the search engine does function as a downloader to download the web page from remote server. Thus, limitation of claim is met.

It is noted that Scarborough does not disclose operating a multiplicity of downloaders simultaneously by supplying to each downloader one URL at a time. However, this is known in the art taught by Thomas. Thomas teaches that "The URL thread is responsible for downloading

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of Web pages corresponding to the URL's found by the queue thread 402. In a preferred embodiment of the present invention, the URL thread 404 is capable of downloading multiple URL's simultaneously to the cache of file system 104" (see lines 21-26 of column 14). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Thomas to provide a faster process of downloading web pages.

22. Regarding claim 15, it is noted that Scarborough does not disclose deleting executable content from the web page. However, this is known in the art taught by Thomas. Thomas teaches that "In order to obtain a 'self-sustaining' local copy of the Web page, only the inline contents of each Web page of the preliminary list of URL's is archived to the file system 104", see lines 54-64 of column 9). It is further noted that non-inline contents were not included, or deleted, because they include the links that Web pages contain to other Web sites. Although, the claim recites executable content, the term is broad enough cover the content deleted disclosed by Thomas. Thus, limitation of claim is met.

23. Regarding claim 16, Scarborough discloses a graphic user interface display method comprising:

Causing each downloader to retrieve from the Internet, a web page and embedded objects corresponding to the URL supplied to it and causing a thumbnail generator to operate a corresponding web browser to render the web page ("The data repository 80 sends back text and image data 170 to the image processor which, in turn, renders 90 the same graphic user interface layout that would be displayed on the end-user interface is then reduced to a bitmap image 100", see lines 24-60 of column 9 and Fig. 2, 3, and 4). It is further noted that while Scarborough does not disclose a downloader, however, it would have been obvious to one of ordinary skill in the

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art to understand that when the search engine sends a request to a remote server and receiving web pages, the search engine does function as a downloader to download the web page from remote server. Thus, limitation of claim is met.

It is noted that Scarborough does not disclose employ a locally stored copy of said web page. However, this is known in the art taught by Thomas. Thomas teaches that "The archive thread 408 archives the inline contents of each Web page of each URL's to the file system 104" (see lines 62-66 of column 14). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Thomas to provide a faster search process.

Regarding claim 17, it is noted that Scarborough does not disclose a web server is employed for providing said locally stored copy of said web page and of said embedded objects to said web browsers. However this is known in the art taught by Thomas. Thomas teaches that "The archive thread 408 archives the inline contents of each Web page of each URL's to the file system 104" (see lines 62-66 of column 14 and elements 104 and 108 of Fig. 2). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Thomas to provide a faster search process to generate a report for the user.

24. Regarding claims 34-37, the statement presented, above, with respect to claims 14-17 are incorporated herein.

25. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarborough et al. (US 6,353,448; refer to as Scarborough herein) as applied to claim 1 above, and further in view of Aden (US 6,273,857).

26. Regarding claims 18-20, Scarborough discloses a graphic user interface display method comprising visual image of web page and hyperlink ("FIG. 4 illustrates an exemplary screen

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display of search results as displayed on the end-user interface 120. At least one or more displayed bitmap images 230 are presented to the end-user along with the traditional text information of the prior art search engines", see lines 58-67 of column 4 and lines 61-65 of column 9 and Fig. 4 and 8). It is noted that Scarborough does not disclose visual image of web page appears hovering over hyperlink. However, this is known in the art taught by Aden. Aden discloses a "hyperlink that is associated with a particular measurement value is activated, e.g., by 'clicking on' or 'hovering' a cursor over the hyperlink, the examination report that is displayed on the display device is replaced with the ultrasound image that corresponds to the particular measurement value" (see lines 37-42 of column 3). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Aden to provide a functionality of displaying image on a web page that is very well known in the art. This method is often referred as onMouseover in JavaScript.

27. Regarding claims 38-40, the statement presented, above, with respect to claims 18-20 are incorporated herein.

Claim Rejections - 35 USC § 112

28. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

29. Claims 13 and 33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Although the claim recites "trimming a path component based on the consideration of

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finding the most representative image of a given web page". However, there is not enough explanation for one of ordinary skill in the art to utilize the claim method.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bates et al. (US 6,456,307) disclose "Automatic Icon Generation".

Nielsen (US 5,963,964) discloses "Method, Apparatus and Program Product for Updating Visual Bookmarks".

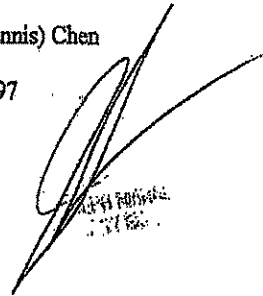
Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-8365. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (703) 305-4717. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6743 for regular communications and (703) 308-6743 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Po-Wei (Dennis) Chen
Examiner
Art Unit 2697





6A
Butt

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : Shirli RAN et al.
Serial No. : 09/708,191
Filed : November 8, 2000
For : FRAMEWORK FOR PROVIDING VISUAL
CONTEXT TO WWW HYPERLINKS

Group Art Unit: 2697
Examiner: Po Wei Chen

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

RECEIVED

JUL 14 2003

Technology Center 2600

Sir:

AMENDMENT

In response to the Official Action mailed April 8, 2003, kindly amend the above-identified application as follows:

In the specification:

Kindly add the following paragraph at the beginning of page 1 of the Specification:

-PRIORITY CLAIM

A₁₀

This application claims priority from Provisional Application Serial No. 60/169,328, filed December 6, 1999,--

CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231

Date: July 8, 2003

CLIFFORD J. MASS
(Type or print name of person mailing paper)

(Signature of person mailing paper)

52



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,191	11/08/2000	Shidi Ran	U 013047-3	1297

7590 09/23/2003
Ladas & Parry
26 West 61st Street
New York, NY 10023

EXAMINER
CHEN, PO WEI

ART UNIT	PAPER NUMBER
----------	--------------

2697

DATE MAILED: 09/23/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.		Applicant(s)	
	08/708,191		RAN ET AL.	
	Examiner		Art Unit	
	Po-Wai (Dennis) Chan		2897	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by this Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.204(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-40 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-40 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-552) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-162) 6) <input type="checkbox"/> Other: _____
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U.S. Patent and Trademark Office
PTOL-326 (Rev. 04-01)

Office Action Summary

Part of Paper No. 7

Application/Control Number: 09/708,191

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Art Unit: 2697

DETAILED ACTION

In response to an Amendment received on July 11, 2003. This action is non-final.

Claims 1-40 are pending in this application. Claims 1, 14, 21 and 34 are independent claims.

The present title of the invention is "Framework for Providing Visual Context to WWW Hyperlinks".

The Group Art Unit of the Examiner case is now 2697. Please use the proper Art Unit number to help us serve you better.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(e) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-4 and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Miller (US 6,613,100).

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3. Regarding claim 1, Miller discloses a method for displaying thumbnails of documents comprising:

A method for presenting Internet information to a user (lines 5-15 of column 4 and Fig. 5);

Providing to a user a visual image of a web page containing at least one hyperlink; and at least partially concurrently providing a visual image of another web page of at least one web site which is represented by said at least one hyperlink (lines 9-38 of column 8 and Fig. 5; URL link corresponds to hyperlink).

4. Regarding claim 2, Miller discloses a method for displaying thumbnails of documents comprising:

The visual image of said another web page is displayed alongside the visual image of said web page (lines 9-38 of column 8 and Fig. 5).

5. Regarding claim 3, Miller discloses a method for displaying thumbnails of documents comprising:

The visual image of said another web page is displayed within the visual image of said web page (lines 9-38 of column 8 and Fig. 2A-B).

6. Regarding claim 4, Miller discloses a method for displaying thumbnails of documents comprising:

Visual images of a plurality of other web pages represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink (lines 9-38 of column 8 and Fig. 5).

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7. Regarding claims 21-24, the statements presented, above, with respect to claims 1-4 are incorporated herein.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6,613,100) as applied to claims 1 and 21 above.

10. Regarding claim 5, while Miller does not specify web page comprises an HTML page, it is well known in the art that a web page contains HTML. It would have been obvious to one of ordinary skill in the art to utilize mark-up language such as HTML to present data in the web page.

11. Regarding claim 25, the statements presented, above, with respect to claim 25 are incorporated herein.

12. Claims 6-11 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6,613,100) as applied to claims 1 and 21 above and further in view of Moore et al. (US 6,310,601; refer to as Moore herein).

13. Regarding claim 6, Miller discloses a method for displaying thumbnails of documents comprising:

Employing a web browser including visualization functionality which interfaces via the Internet with a server (lines 4-41 of column 6, 4-11 of column 7 and lines 50-65 of column 8; it

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is noted that the processor which incorporating with web browser is able to manipulate the images and is obtaining data documents from computer sources such as servers). Miller does not disclose image server. Moore discloses a method of manipulating images on a server utilizing an image server (lines 1-5 of abstract). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Moore to provide a more sophisticated image reduction to deliver scaled images to Web browser clients regardless the their available hardware resources (lines 37-41 of column 2, Moore). Also, both Miller and Moore are directed to a method of scaling images and presenting on web browsers.

14. Regarding claim 7, Miller discloses a method for displaying thumbnails of documents comprising:

Visualization functionality is operative to download from an image database images of web pages which are referenced in hyperlinks contained in the web page and to provide to a user via the web browser. an annotated web page (lines 4-41 of column 6 and lines 9-21 of column 8; it is noted that the processor and the visual presentations are stored in a storage device which corresponds to a database; also while claim recites an annotated page, it is noted that the web page disclosed by Miller contains various sorts of information, lines 34-43 of column 1).

Miller does not disclose image server. However this is known in the art taught by Moore, as statements presented above, with respect to claim 6 are incorporated herein.

15. Regarding claim 8, Miller discloses a method for displaying thumbnails of documents comprising:

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Annotated web page includes the web page having alongside it images of homepages linked with the web page (lines 34-43 of column 1 and lines 9-38 of column 8 and Fig. 5; it is clear that the web page is referring to the main page or home page).

16. Regarding claim 9, Miller discloses a method for displaying thumbnails of documents comprising:

Employing a web browser which interfaces via the Internet with a web server (lines 4-41 of column 6, lines 9-65 of column 8; it is noted that the document source can be from servers via Internet). Miller does not disclose the web server including visualization functionality. Moore discloses a method of manipulating images on a server utilizing a web server with visualization functionality (lines 19-35 of column 5 and Fig. 1; it is noted that the application resided on the web server is responsible for searching and scaling images). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Moore to provide a more sophisticated image reduction to provide the advantage of requiring less amount of image information being transfer, thus a faster web content delivery (lines 35-65 of column 5, Moore). Also, both Miller and Moore are directed to a method of scaling images and presenting on web browsers.

17. Regarding claim 10, statements presented above, with respect to claim 7 are incorporated herein. Also, Miller disclose visualization functionality is operative to embed commands to the web browser (lines 4-16 of column 6; while claim recites embed commands, it is noted that the processor corresponds to visualization functionality is running applications such as web browser using instructions, thus, it functions the same as embedding commands to the web browser).

18. Regarding claim 11, statements presented above, with respect to claim 8 are incorporated herein. Also, see Fig. 2A-B.

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19. Regarding claims 26-31, the statements presented, above, with respect to claims 6-11 are incorporated herein.

20. Claims 12 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6,613,100) and Moore et al. (US 6,310,601; refer to as Moore herein) as applied to claims 1 and 21 above and further in view of Weinberg et al. (US 6,144,962; refer to as Weinberg herein) and Mighdoll et al. (US 6,073,168; refer to as Mighdoll herein).

21. Regarding claim 12, Miller discloses a method for displaying thumbnails of documents comprising:

Generation of a list of hyperlinks from a web page and visualizing hyperlinks (lines 22-65 of column 8; URLs corresponds to hyperlinks);

The combination of Miller and Moore does not disclose elimination of links which refer back to a web server sending said web page. However, this is known in the art taught by Weinberg. Weinberg teaches a visualization of web sites that "The left-hand and right-hand location filters 51 filter out local URLs and external URLs, respectively, based on the domain names of the URLs" (see lines 36-39 of column 16; It is noted that while claim recites links which refer back to a web server sending said web page, it would have been obvious to one of ordinary skill in the art to realize local links refer the same). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Weinberg to eliminate local links to generate more efficient search results from the internet without unwanted information from own search engine.

The combination of Miller, Moore and Weinberg does not disclose determination of whether redirection links are present. However, this is known in the art taught by Mighdoll.

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Mighdoll teaches that "for every Web page that is retrieved from a remote server 4, any or all of the following data are stored in the document database 61...11) whether the Web page has been redirected to another remote server 4; 12) redirect address (if appropriate)", see lines 20-44 of column 6). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Mighdoll to provide the advantage of improving the security of confidential customer information in a server system coupled to the Internet (lines 32-34 of column 2, Mighdoll).

22. Regarding claim 12, the statements presented, above, with respect to claim 32 are incorporated herein.

23. Claims 13 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6,613,100) and Moore et al. (US 6,310,601; refer to as Moore herein) as applied to claims 1 and 21 above and further in view of Chu (US 6,262,708) and Mutschler, III et al. (US 5,940,075; refer to as Mutschler herein).

24. Regarding claim 13, Miller discloses a method for displaying thumbnails of documents comprising:

Receiving a list of hyperlinks (lines 22-38 of column 8; URLs correspond hyperlinks);

Finding the most representative image of a given web page (line 9-38 of column 8; it is noted that by obtaining thumbnails of the corresponding web pages, most representative image of a given web page is found);

The combination of Miller and Moore does not disclose splitting a URL of each hyperlink into URL components including at least a path component and a host component and trimming a path component. Chu discloses a method for displaying characters utilizing the

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method (lines 41-46 and 50-55 of column 4; it is noted that the document corresponds to path component is being retrieved or trimmed from the URL). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Chu to provide the advantage of legibly displaying complex characters on Web pages (lines 17-20 of column 2, Chu). Also, splitting or trimming a hyperlink is a very well known method in the art of web site programming such as JavaScript and ASP.

The combination of Miller, Moore and Chu does not disclose constructing a new URL including a path component. Mutschler discloses a method of extending HTML for application data binding utilizing the method (lines 33-36 of column 5; application data value corresponds to path component). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Mutschler to provide the advantage of increasing productivity and reducing development and training costs (lines 40-43 of column 3, Mutschler). Also, constructing a URL is a very well known method in the art of web site programming such as JavaScript and ASP.

25. Regarding claim 33, the statements presented, above, with respect to claim 13 are incorporated herein.

26. Claims 14-17 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6,613,100) and further in view of Bates et al. (US 6,456,307; refer to as Bates) and Thomas (US 6,401,118).

27. Regarding claim 14, Miller discloses a method for displaying thumbnails of documents comprising:

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A method for generating a web page image database (lines 4-16 of column 6 and 9-38 of column 8; while claim recites database, it is noted that the thumbnails images representing the web pages are stored in storage device corresponds to a database).

Receiving a list of URLs corresponding to web pages, the images of which it is desired to download into an image database (22-65 of column 8; while claim recites download, it is noted that the document is being obtain by the browser using the URL performs same as download).

Causing downloader to retrieve from the Internet, a web page corresponding to the URL supplied to it and supply thumbnail to the downloader (29-42 of column 6; the processor corresponds to a downloader);

Miller does not disclose causing a thumbnail generator to render the web page; causing said thumbnail generator to shrink said rendered image of the web page. Bates discloses automatic icon generation utilizing the method (lines 37-53 of column 22). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Bates to provide a user a easy way to distinguish between browser invocations by viewing the different icons (lines 24-26 of column 2, Bates). Also, both Miller and Bates are directed to a method using thumbnail image representations of web pages to provide better access to the pages.

The combination of Miller and Bates does not disclose operating a multiplicity of downloaders simultaneously by supplying to each downloader one URL at a time and retrieving embedded objects. Thomas teaches a method for monitoring search engine utilizing the method (lines 8-24 of column 9 and lines 21-26 of column 14; it is noted that the downloaded page including embedded contents). It would have been obvious to one of ordinary skill in the art at

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the time of invention to utilize the teaching of Thomas to provide a quicker and more efficient way to search within Internet (lines 52-56 of column 2, Thomas).

28. Regarding claim 15, it is noted that Miller does not disclose deleting executable content from the web page. However, this is known in the art taught by Thomas. Thomas teaches that "In order to obtain a 'self-sustaining' local copy of the Web page, only the inline contents of each Web page of the preliminary list of URL's is archived to the file system 104", see lines 54-64 of column 9). It is further noted that non-inline contents were not included, or deleted, because they include the links that Web pages contain to other Web sites. Although, the claim recites executable content, the term is broad enough cover the content deleted disclosed by Thomas. Thus, limitation of claim is met.

29. Regarding claim 16, statements presented above, with respect to claim 14 are incorporated herein. Further, it is noted that Miller does not disclose employ a locally stored copy of said web page. However, this is known in the art taught by Thomas. Thomas teaches that "The archive thread 408 archives the inline contents of each Web page of each URL's to the file system 104" (see lines 62-66 of column 14). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Thomas to provide a faster search process.

30. Regarding claim 17, it is noted that Miller does not disclose a web server is employed for providing said locally stored copy of said web page and of said embedded objects to said web browser. However this is known in the art taught by Thomas. Thomas teaches that "The archive thread 408 archives the inline contents of each Web page of each URL's to the file system 104" (see lines 62-66 of column 14 and elements 104 and 108 of Fig. 2). It would have been obvious

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to one of ordinary skill in the art at the time of invention to utilize the teaching of Thomas to provide a faster search process to generate a report for the user (lines 52-60 of column 2, Thomas).

31. Regarding claims 34-37, the statements presented, above, with respect to claims 14-17 are incorporated herein.

32. Claims 18-20 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 6,613,100) as applied to claims 1 and 21 above, and further in view of Aden (US 6,273,857).

33. Regarding claims 18-20, Miller discloses a method for displaying thumbnails of documents comprising:

Visual image of web page and hyperlink (lines 9-38 of column 8; URLs correspond hyperlinks).

Miller does not disclose visual image of web page appears hovering over hyperlink.

However, this is known in the art taught by Aden. Aden discloses a "hyperlink that is associated with a particular measurement value is activated, e.g., by 'clicking on' or 'hovering' a cursor over the hyperlink, the examination report that is displayed on the display device is replaced with the ultrasound image that corresponds to the particular measurement value" (see lines 37-42 of column 3). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Aden to provide a functionality of displaying image on a web page that is very well known in the art. This method is often referred as onmouseover in JavaScript.

34. Regarding claims 38-40, the statements presented, above, with respect to claims 18-20 are incorporated herein.

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Response to Arguments

35. Applicant's arguments, see pages 2-6, filed July 11, 2003, with respect to the rejection(s) of claim(s) 1-40 under 35 U.S.C. 103/102(e) and have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references Miller (US 6,613,100), Moore et al. (US 6,310,601); Chu (US 6,262,708) and Mutschler et al. (US 5,940,075).

The applicant argues: Scarborough is no longer available as a reference for independent claims 1, 14, 21 and 34. The office finds the argument persuasive and agrees with the argument. However, upon further consideration, new ground of rejection is made in view of newly found prior art references, as statements presented above, with respect to claims 1, 14, 21 and 34 are incorporated herein.

Conclusion

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kanno et al. (US 6,526,424);

Ramos et al. (US 6,421,070);

Nielsen (US 5,963,964).

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-8365. The examiner can normally be reached on 9am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofisass can be reached on (703) 305-4717. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6743 for regular communications and (703) 308-6743 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Po-Wei (Dennis) Chen
Examiner
Art Unit 2697

Po-Wei (Dennis) Chen
September 11, 2003



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 26C6

Notice of References Cited	Application/Control No. 08/708,181	Applicant(s)/Patent Under Reexamination RAN ET AL.	
	Examiner Po-Wel (Dennis) Chen	Art Unit 2897	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
A		US-6,813,100	08-2003	Miller, John David	715/528
B		US-6,310,801	10-2001	Moore et al.	345/880
C		US-6,401,118	09-2002	Thomas, Jason B.	709/224
D		US-6,144,882	11-2000	Weinberg et al.	707/10
E		US-6,073,168	08-2000	Mighdall et al.	709/217
F		US-6,456,307	08-2002	Bates et al.	345/838
G		US-6,273,857	08-2001	Aden, Michael	800/437
H		US-6,282,708	07-2001	Chu, Sing Yun	345/867
I		US-6,940,075	08-1998	Mulscher et al.	345/760
J		US-6,528,424	02-2003	Kanno et al.	715/512
K		US-6,421,070	07-2002	Ramos et al.	345/783
L		US-6,983,984	10-1998	Nielsen, Jakob	715/501.1
M		US-6,184,888	02-2001	Bates et al.	345/780

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title, Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office
PTO-882 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 7

Interview Summary	Application No.	Applicant(s)	
	09/708,191	RAN ET AL.	
	Examiner	Art Unit	
	Po-Wel (Dennis) Chen	2876	

All participants (applicant, applicant's representative, PTO personnel):

(1) Po-Wel (Dennis) Chen (PTO). (3) Sanford Colb.
(2) Matthew Bella (PTO). (4) Yusuf Yavom

Date of interview: November 25, 2003.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.
If Yes, brief description: _____

Claim(s) discussed: all of record

Identification of prior art discussed: _____

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: see below

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Discussed amending claim 1 with language from claim 6. The examiner will update his search based on these amendments. (see attachment) This appears to overcome the art of record.
Also, discussed claim 14 in that the prior art does not teach a "multiplicity of down loader". The examiner will review the references.

Matthew C. Bella
MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

CLAIMS

1. A method for presenting Internet information to a user comprising:
providing to a user a visual image of a web page containing at least one hyperlink; and at least partially concurrently
providing a ~~visual~~^{thumbnail} image of another web page of at least one web site which is represented by said at least one hyperlink.
2. A method according to claim 1 and wherein the visual image of said another web page is displayed alongside the visual image of said web page.
3. A method according to claim 1 and wherein the visual image of said another web page is displayed within the visual image of said web page.
4. A method according to claim 1 and wherein visual images of a plurality of other web pages represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink.
5. A method according to claim 1 and wherein said web page comprises an HTML page.
6. A method according to claim 1 and wherein providing a visual image of another web page comprises:
employing a web browser including ~~visualization functionality~~ which interfaces via the Internet with an image server, *that provides said thumbnail visual image of another web page.*
7. A method according to claim 6 and wherein said visualization functionality is operative to download via the image server from an image database images of web pages which are referenced in hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.
8. A method according to claim 7 and wherein said annotated web page includes



Practitioner's Docket U013047-3

#8
Amend-B
12/29/03
NOT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Shirli RAN et al.

Serial No. : 09/708,191

Filed : November 8, 2000

For : FRAMEWORK FOR PROVIDING VISUAL
CONTEXT TO WWW HYPERLINKS

RECEIVED

DEC 29 2003

Technology Center 2000

Group Art Unit: 2676

Examiner: Po-Wei (Dennis) Chen

Hon. Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

AMENDMENT

The following amendment is in response to the outstanding Office Action
mailed September 23, 2003.

12/29/03

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for presenting Internet information to a user comprising:

providing to a user a visual image of a web page containing at least one hyperlink; and at least partially concurrently

providing a thumbnail visual image of another web page of at least one web site which is represented by said at least one hyperlink via the Internet by employing an image server that stores and provides said thumbnail visual image.

2. (Currently Amended) A method according to claim 1 and wherein the said thumbnail visual image of said another web page is displayed alongside the visual image of said web page.

3. (Currently Amended) A method according to claim 1 and wherein the said thumbnail visual image of said another web page is displayed within the visual image of said web page.

4. (Currently Amended) A method according to claim 1 and wherein visual images of a plurality of other web pages thumbnail visual images represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink.

5. (Original) A method according to claim 1 and wherein said web page comprises an HTML page.

6. (Currently Amended) A method according to claim 1 and wherein said providing a thumbnail visual image of another web page comprises:

employing a web browser including visualization functionality which interfaces via the Internet with an said image server.

7. (Currently Amended) A method according to claim 6 and wherein said visualization

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functionality is operative to download via the image server from an image database images of web pages which ~~represent are referenced in~~ hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

8. (Currently Amended) A method according to claim 7 and wherein said annotated web page includes the web page having alongside it ~~thumbnail visual images of homepages of web sites referenced by hyperlinks contained in~~ linked with the web page.

9. (Currently Amended) A method according to claim 1 and wherein said providing a thumbnail visual image ~~of another web page~~ comprises:

employing a web browser which interfaces via the Internet with a web server including visualization functionality.

10. (Currently Amended) A method according to claim 9 and wherein said visualization functionality is operative to embed commands to the web browser to download, via an ~~said~~ image server, ~~thumbnail visual images of web pages which represent are referenced in~~ hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

11. (Currently Amended) A method according to claim 10 and wherein said annotated web page includes the web page having within it ~~thumbnail visual images of homepages of web sites referenced by hyperlinks contained in~~ linked with the web page.

12. (Currently Amended) A method according to claim 6 and wherein said visualization functionality comprises:

generation of a list of hyperlinks from a web page;

elimination of links which refer back to a web server sending said web page;

determination of whether redirection links are present and if so, ~~visualizing an ultimate destination providing thumbnail visual images of ultimate destinations thereof; and~~

~~visualizing providing thumbnail visual images of remaining hyperlinks.~~

13. (Original) A method according to claim 6 and wherein said visualization functionality comprises:

- receiving a list of hyperlinks;
- splitting a URL of each hyperlink into URL components including at least a path component and a host component;
- trimming a path component based on the consideration of finding the most representative image of a given web page; and
- constructing a new URL including a trimmed path component.

14. (Currently Amended) A method for generating a web-page-image database of ~~thumbnail visual images of web pages~~, the method comprising:

- receiving a list of URLs corresponding to ~~said web pages~~, the thumbnail visual images of which it is desired to download into an image supply to said database;
- operating a multiplicity of downloaders simultaneously by supplying to each downloader one URL at a time;

~~causing each downloader to retrieve from the Internet, a web-page web pages and embedded objects corresponding to the URL supplied to it URLs from said list;~~

~~causing a thumbnail generator to render the web-page retrieved web pages retrieved simultaneously by said multiplicity of downloaders; and~~

~~causing said thumbnail generator to shrink said rendered image of the web-page and supply it to the downloader images of said retrieved web pages and supply them to said database.~~

15. (Currently Amended) A method according to claim 14 also comprising deleting executable content from the web-page ~~said retrieved web pages~~.

16-17. (Canceled)

18. (Currently Amended) A method according to claim 1 and wherein said ~~thumbnail visual image of another web-page appears hovering over said hyperlink.~~

19. (Currently Amended) A method according to claim 2 and wherein said ~~thumbnail~~ visual image of another web page appears hovering over said hyperlink.

20. (Currently Amended) A method according to claim 3 and wherein said ~~thumbnail~~ visual image of another web page appears hovering over said hyperlink.

21. (Currently Amended) A system for presenting Internet information to a user comprising:

first functionality providing to a user a visual image of a web page containing at least one hyperlink; and

second functionality operative at least partially concurrently with said first functionality for providing a ~~thumbnail~~ visual image of another web page of at least one web site which is represented by said at least one hyperlink via the Internet by employing an image server that stores and provides said ~~thumbnail~~ visual image.

22. (Currently Amended) A system according to claim 21 and wherein the said ~~thumbnail~~ visual image of said another web page is displayed alongside the visual image of said web page.

23. (Currently Amended) A system according to claim 21 and wherein the said ~~thumbnail~~ visual image of said another web page is displayed within the visual image of said web page.

24. (Currently Amended) A system according to claim 21 and wherein visual images of a plurality of other web pages ~~thumbnail~~ visual images represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink.

25. (Original) A system according to claim 21 and wherein said web page comprises an HTML page.

26. (Currently Amended) A system according to claim 21 and wherein said second functionality comprises third functionality employing a web browser including visualization functionality which interfaces via the Internet with ~~an said image server.~~

27. (Currently Amended) A system according to claim 26 and wherein said visualization functionality is operative to download via the image server from an image database images of web pages which ~~represent are referenced in~~ hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

28. (Currently Amended) A system according to claim 27 and wherein said annotated web page includes the web page having alongside it thumbnail visual images of ~~homepages of web sites referenced by hyperlinks contained in linked with~~ the web page.

29. (Original) A system according to claim 21 and wherein said second functionality comprises fourth functionality employing a web browser which interfaces via the Internet with a web server including visualization functionality.

30. (Currently Amended) A system according to claim 29 and wherein said visualization functionality is operative to embed commands to the web browser to download, via ~~an said image server,~~ thumbnail visual images of web pages which ~~represent are referenced in~~ hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

31. (Currently Amended) A system according to claim 30 and wherein said annotated web page includes the web page having within it thumbnail visual images of ~~homepages of web sites referenced by hyperlinks contained in linked with~~ the web page.

32. (Currently Amended) A system according to claim 26 and wherein said visualization functionality comprises:

generation of a list of hyperlinks from a web page;

elimination of links which refer back to a web server sending said web page;

determination of whether redirection links are present and if so, ~~visualizing an ultimate destination providing thumbnail visual images of ultimate destinations thereof; and~~

~~visualizing providing thumbnail visual images of remaining hyperlinks.~~

33. (Original) A system according to claim 26 and wherein said visualization functionality comprises

receiving a list of hyperlinks;

splitting a URL of each hyperlink into URL components including at least a path component and a host component;

trimming a path component based on the consideration of finding the most representative image of a given web page; and

constructing a new URL including a trimmed path component.

34. (Currently Amended) A system for generating a ~~web-page-image database of thumbnail visual images of web pages~~, the system comprising:

~~a multiplicity of downloaders, each at least one downloader receiving at least one URL at a time from a list of URLs corresponding to said web pages, the thumbnail visual images of which it is desired to supply to said database, and simultaneously retrieving from the Internet a web-page web pages and embedded objects corresponding to said at least one URL, the URL received by it; and~~

~~at least one thumbnail generator operative to render the web pages, shrink said rendered images of the web pages and supply said rendered images to said database-the downloader.~~

35. (Currently Amended) A system according to claim 34 and wherein said ~~multiplicity of downloaders are at least one downloader~~ is operative to delete executable content from the web pages.

36-37. (Cancelled)

38. (Currently Amended) A system according to claim 21 and wherein said thumbnail

visual image of another web page appears hovering over said hyperlink.

39. (Currently Amended) A system according to claim 22 and wherein said ~~thumbnail~~
visual image of another web page appears hovering over said hyperlink.

40. (Currently Amended) A system according to claim 23 and wherein said ~~thumbnail~~
visual image of another web page appears hovering over said hyperlink.

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REMARKS

Applicant has carefully studied the outstanding Office Action in the present application. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Claims 1-4 and 21-24 stand rejected under 35 USC 102(e) as being anticipated by Miller. Claims 5 and 25 stand rejected under 35 USC 103(a) as being unpatentable over Miller. Claims 6-11 and 26-31 stand rejected under 35 USC 103(a) as being unpatentable over Miller and further in view of Moore et al. Claims 12 and 32 stand rejected under 35 USC 103(a) as being unpatentable over Miller and Moore et al and further in view of Weinberg et al and Mighdoll et al. Claims 13 and 33 stand rejected under 35 USC 103(a) as being unpatentable over Miller and Moore et al and further in view of Chu and Mutschler, III et al. Claims 14-17 and 34-37 stand rejected under 35 USC 103(a) as being unpatentable over Miller and further in view of Bates et al and Thomas. Claims 18-20 and 38-40 stand rejected under 35 USC 103(a) as being unpatentable over Miller and Moore et al and further in view of Aden.

Applicants express their appreciation to Examiner Po-Wei Chen and SPE Matthew Bella for the courtesy of an interview which was granted to one of the applicants Yuval Yarom and to applicants' representative, Sanford T. Colb (Reg. No. 26,856). The interview was held at the USPTO on November 25, 2003. The substance of the interview is set forth in the Interview Summary, Paper No. 7.

At the interview, an amendment to claim 1 was proposed, based on originally filed claim 6 and specifying that it is the image server, rather than the client as in the prior art, which provides the thumbnail visual image, thus obviating the need for the client to download the web pages which are represented by the thumbnail visual images. This difference, which greatly reduces the time and cost of providing thumbnail visual images, was indicated to appear to overcome the art of record.

Additionally, at the interview claim 14 was discussed and it was noted that the prior art does not show the use of simultaneously operated multiple downloaders feeding a thumbnail generator. This feature greatly enhances the speed of operation and cost effectiveness of thumbnail visual image database generation. Claim 14 has been amended for clarity.

Additionally, system claims 21 and 34, which correspond to method claims 1 and 14, have been amended in a similar fashion as claims 1 and 14.

Claims 2-4, 6-12, 15, 18-20, 22-24, 26-28, 30-32, 35 and 38-40 have also been amended for clarity and to recite proper antecedents. Claims 16-17 and 36-37 have been cancelled without prejudice.

Miller discloses an apparatus for displaying thumbnails of documents for alternative selection by a user. Miller does not show or suggest "providing a thumbnail visual image ... by employing an image server that stores and provides said thumbnail visual image" as recited in amended claims 1 and 21. Miller also does not show or suggest "A method for generating a database of thumbnail visual images of web pages, the method comprising ... operating a multiplicity of downloaders simultaneously" as recited in amended claims 14 and 34.

Moore et al discloses a method and apparatus for resizing images. Moore et al does not show or suggest "providing a thumbnail visual image ... by employing an image server that stores and provides said thumbnail visual image" as recited in amended claims 1 and 21. Moore also does not show or suggest "A method for generating a database of thumbnail visual images of web pages, the method comprising ... operating a multiplicity of downloaders simultaneously" as recited in amended claims 14 and 34.

Bates et al. discloses a mechanism for automatically generating icons. Bates et al does not show or suggest "providing a thumbnail visual image ... by employing an image server that stores and provides said thumbnail visual image" as recited in amended claims 1 and 21. Bates also does not show or suggest "A method for generating a database of thumbnail visual images of web pages, the method comprising ... operating a multiplicity of downloaders simultaneously" as recited in amended claims 14 and 34.

Thomas discloses an online monitoring search engine. Thomas does not

show or suggest "providing a thumbnail visual image ... by employing an image server that stores and provides said thumbnail visual image" as recited in amended claims 1 and 21. Thomas also does not show or suggest "A method for generating a database of thumbnail visual images of web pages, the method comprising ... operating a multiplicity of downloaders simultaneously" as recited in amended claims 14 and 34.

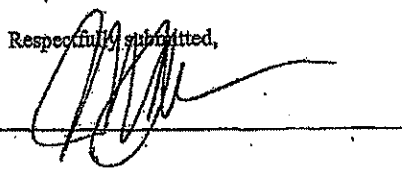
As discussed hereinabove, none of the prior art, either alone or in combination, show or suggest "providing a thumbnail visual image ... by employing an image server that stores and provides said thumbnail visual image" as recited in amended claims 1 and 21. Additionally, none of the prior art, either alone or in combination, show or suggest "A method for generating a database of thumbnail visual images of web pages, the method comprising ... operating a multiplicity of downloaders simultaneously" as recited in amended claims 14 and 34.

With reference to the above discussion, independent claims 1, 14, 21 and 34 are deemed patentable over the prior art of record and favorable reconsideration is respectfully requested. Claims 2-13, 15, 18-20, 22-33, 35 and 38-40 each depend directly or ultimately from one of these claims and recite additional patentable subject matter and therefore are deemed patentable.

Applicant reserves the right to pursue the claims as filed in the context of a continuation application.

In view of the foregoing, all of the claims are deemed to be allowable. Favorable reconsideration and allowance of the application is respectfully requested.

Respectfully submitted,



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,191	11/08/2000	Shih Hsu	U/013047-3	1297
7599 03/11/2004				
Ladas & Parry 26 West 61st Street New York, NY 10023		EXAMINER CHEN, PO WEI		
		ART UNIT 2676	PAPER NUMBER	

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTQ-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	09/708,191	RAN ET AL.	
	Examiner	Art Unit	
	Po-Wel (Dannis) Chen	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.

If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.

Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on December 22, 2003.

2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-15, 18-35 and 38-40 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-15, 18-35 and 38-40 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-848)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)

Paper No(s)/Mail Date _____

4) ☐ Interview Summary (PTO-413)

Paper No(s)/Mail Date _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

U.S. Patent and Trademark Office
PTOL-328 (Rev. 1-04)

Office Action Summary

Part of Paper No./Mail Date 9

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Art Unit: 2676.

DETAILED ACTION

In response to an Amendment received on December 22, 2003. This action is final.

Claims 1-15, 18-35 and 38-40 are pending in this application. Claims 1, 14, 21 and 34 are independent claims.

The present title of the invention is "Framework for Providing Visual Context to WWW Hyperlinks".

The Group Art Unit of the Examiner case is now 2697. Please use the proper Art Unit number to help us serve you better.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 9-10, 21-27 and 29-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (US 6,665,838; refer to as Brown herein).

3. Regarding claim 1, Brown discloses a method of providing web page thumbnails from a server comprising:

A method for presenting Internet information to a user (lines 1-7 of abstract and lines 38-64 of column 3 and Fig. 2);

Providing to a user a visual image of a web page containing at least one hyperlink; and at least partially concurrently; providing a thumbnail visual image of another web page of at least

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one web site which is represented by said at least one hyperlink via the Internet by employing an image server that stores and provides said thumbnail visual image (line 5-33 of column 6 and lines 1-29 of column 7 and Fig. 5-8; while claim recites image server, it is noted that the proxy server generates and stores web page thumbnail images to be displayed to the users corresponds to a image server).

4. Regarding claims 2-4, Brown discloses a method of providing web page thumbnails from a server comprising:

Thumbnail visual image is displayed alongside the visual image of said web page; thumbnail visual image is displayed within the visual image of said web page; a plurality of thumbnail visual images represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink (Fig. 8)

5. Regarding claim 5, Brown discloses a method of providing web page thumbnails from a server comprising:

Said web page comprises an HTML page (lines 58-64 of column 7 and Fig. 9).

6. Regarding claims 6-7, Brown discloses a method of providing web page thumbnails from a server comprising:

Employing a web browser including visualization functionality which interfaces via the Internet with said image server; visualization functionality is operative to download from an image database images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page (lines 1-7 of abstract, lines 5-33 of column 6 and lines 1-29 of column 7 and Fig. 5-8; the browser allows the user to select option

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of display thumbnails, and the server functions accordingly. Thus, the browser has the function operating to retrieve or download images of web pages from the database of server).

7. Regarding claims 9-10, Brown discloses a method of providing web page thumbnails from a server comprising:

Employing a web browser which interfaces via the Internet with a web server including visualization functionality. Said visualization functionality is operative to embed commands to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page (lines 5-33 of column 6, lines 1-29 of column 7, lines 42-67 of column 7 and lines 1-13 and lines 47-65 of column 8 and Fig. 5-8; it is noted that the server has functionality to construct web page which contains HTML code or embed commands to the browser which allow user to click or select via the browser to download web page thumbnail images desired. Proxy server functions as image server and web server).

8. Regarding claims 21-27 and 29-30, statements presented above, with respect to claims 1-7 and 9-10 are incorporated herein.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 8, 11, 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,665,838; refer to as Brown herein) as applied to claims 1 and 21 above and further in view of Miller (US 6,613,100).

11. Regarding claim 8, Brown discloses a method of providing web page thumbnails from a server comprising:

Annotated web page includes the web page having alongside it thumbnail visual images of web sites referenced by hyperlinks contained in the web page (lines 1-29 of column 7 and Fig. 7-8). Brown does not disclose home pages of web sites. Miller disclose a method of displaying thumbnails of documents utilizing the function (lines 34-43 of column 1 and lines 9-38 of column 8 and Fig. 5; it is clear that the web page is referring to the main page or home page).

It would have been obvious to one of ordinary skill in the art at the time of invention to utilize-substitute the method of displaying web page thumbnails of Miller for the method of displaying web page thumbnails of Brown because Miller teaches by utilizing the method will provide the user a quick access to other documents such as home pages of alternative web sites (lines 36-38 of column 4).

12. Regarding claims 11, 28 and 31, statements presented above, with respect to claim 8 are incorporated herein.

13. Claims 12 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,665,838; refer to as Brown herein) as applied to claims 1 and 21 above and further in view of Weinberg et al. (US 6,144,962; refer to as Weinberg herein) and Smith et al. US 6,578,078; refer to as Smith herein).

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14. Regarding claim 12, Brown discloses a method of providing web page thumbnails from a server comprising:

Generation of a list of hyperlinks from a web page and providing thumbnail visual images of hyperlinks (lines 1-7 of abstract);

Brown does not disclose elimination of links which refer back to a web server sending said web page. However, this is known in the art taught by Weinberg. Weinberg teaches a visualization of web sites that "The left-hand and right-hand location filters 51 filter out local URLs and external URLs, respectively, based on the domain names of the URLs" (see lines 36-39 of column 16; It is noted that while claim recites links which refer back to a web server sending said web page, it would have been obvious to one of ordinary skill in the art to realize local links refer the same). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Weinberg to eliminate local links to generate more efficient search results from the internet without unwanted information from own search engine.

The combination of Brown and Weinberg does not disclose determination of whether redirection links are present and providing ultimate destinations thereof. Smith discloses a method of preserving referential integrity within web sites utilizing the method (lines 30-50 of column 13). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Smith to provide a user with better experience on surfing web sites because the browser will automatically redirect the web page to the desired location without user performing any step (lines 30-50 of column 13, Smith).

15. Regarding claim 32, the statements presented, above, with respect to claim 12 are incorporated herein.

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16. Claims 13 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,665,838; refer to as Brown herein) as applied to claims 1 and 21 above and further in view of Chu (US 6,262,708) and Mutschler, III et al. (US 5,940,075; refer to as Mutschler herein).

17. Regarding claim 13, Brown discloses a method of providing web page thumbnails from a server comprising:

Receiving a list of hyperlinks (lines 24-42 of column 2; Internet links correspond to hyperlinks);

Finding the most representative image of a given web page (lines 5-50 of column 6; while claim recites most representative image, it is noted that each web page is retrieve according to the link, and thumbnail image is generated accordingly, thus it can be considered as most representative for the link);

The combination of Miller and Helfman does not disclose splitting a URL of each hyperlink into URL components including at least a path component and a host component and trimming a path component. Chu discloses a method for displaying characters utilizing the method (lines 41-46 and 50-55 of column 4; it is noted that the document corresponds to path component is being retrieved or trimmed from the URL). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Chu to provide the advantage of legibly displaying complex characters on Web pages (lines 17-20 of column 2, Chu). Also, splitting or trimming a hyperlink is a very well known method in the art of web site programming languages such as JavaScript and ASP.

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The combination of Miller, Helfman and Chu does not disclose constructing a new URL including a path component. Mutschler discloses a method of extending HTML for application data binding utilizing the method (lines 33-36 of column 5; application data value corresponds to path component). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Mutschler to provide the advantage of increasing productivity and reducing development and training costs (lines 40-43 of column 3, Mutschler). Also, constructing a URL is a very well known method in the art of web site programming languages such as JavaScript and ASP.

18. Regarding claim 33, the statements presented, above, with respect to claim 13 are incorporated herein.

19. Claims 18-20 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,665,838; refer to as Brown herein) as applied to claims 1 and 21 above, and further in view of Hansen et al. (US 6,182,097; refer to as Hansen herein).

20. Regarding claims 18-20, Brown does not disclose visual image appears hovering over said hyperlink. Hansen discloses a method for visualizing patterns of usage of a web site utilizing the method (lines 26-46 of column 6; while claim recites hovering, the term is broad enough to including overlaying an image over the HTML link). It would have been obvious to one of ordinary skill in the art to substitute the method of displaying HTML links of Hansen for the method of displaying HTML links of Brown to provide a more effective way of displaying HTML links by providing additional information or simply making it more easy to find by using images over the links.

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21. Regarding claims 38-40, the statements presented, above, with respect to claim 18-20 are incorporated herein.

22. Claims 14 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,665,838; refer to as Brown herein) in view of Meyerzon et al. US 6,199,081; refer to as Meyerzon herein).

23. Regarding claim 14, Brown discloses a method of providing web page thumbnails from a server comprising:

A method for generating a database of thumbnail visual images of web pages (lines 1-7 of abstract and lines 5-18 of column 6).

Receiving a list of URLs corresponding to said web pages, the thumbnail visual images of which it is desired to supply to said database (lines 1-7 of abstract, lines 5-18 of column 6 and lines 1-29 of column 7; it is noted that thumbnail images are in a database environment).

Causing a thumbnail generator to render retrieved web pages retrieved; causing said thumbnail generator to shrink said rendered image of said retrieved web pages and supply them to said database (lines 23-42 of column 2 and lines 5-44 of column 6; the server functions as a thumbnail generator and the images are stored in a database environment).

Brown does not disclose operating a multiplicity of downloaders simultaneously to retrieve from the Internet, web pages and embedded objects corresponding to URLs from said list. Meyerzon discloses a method of automatic tagging of documents utilizing the function (line 46 of column 8 to line 59 of column 9; each worker thread which retrieves web document and has its own pipeline corresponds to a downloader). It would have been obvious to one of ordinary skill in the art to substitute the method of retrieving or downloading web page of

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Meyerzon for the method of downloading web page of Brown because it will provide a faster system since many web pages can be downloaded and processed simultaneously.

24. Regarding claim 34, the statements presented, above, with respect to claim 14 are incorporated herein.

25. Claims 15 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,665,838; refer to as Brown herein) and Meyerzon et al. US 6,199,081; refer to as Meyerzon herein) as applied to claim 14 above, and further in view of Thomas (US 6,401,118)

26. Regarding claim 15, combination of Brown and Meyerzon does not disclose deleting executable content from the web page. However, this is known in the art taught by Thomas.

Thomas teaches that "In order to obtain a 'self-sustaining' local copy of the Web page, only the inline contents of each Web page of the preliminary list of URL's is archived to the file system 104", see lines 54-64 of column 9). It is further noted that non-inline contents were not included, or deleted, because they include the links that Web pages contain to other Web sites. Although, the claim recites executable content, the term is broad enough cover the content deleted disclosed by Thomas. Thus, limitation of claim is met. It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Thomas to provide a web page that is free of undesired content, thus a better web page to the user.

27. Regarding claim 35, the statements presented, above, with respect to claim 15 are incorporated herein.

Response to Arguments

28. Applicant's arguments with respect to claims 1-15, 18-35 and 38-40 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brown et al. (US 6,356,908);

Niblack (US 6,181,342);

Graham et al. (US 6,486,895);

Robertson et al. (US 6,486,895);

Helfman (US 6,119,135).

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Page 12

Inquiry


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-8365. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C Bella can be reached on (703) 308-6829. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Po-Wei (Dennis) Chen
Examiner
Art Unit 2676

Po-Wei (Dennis) Chen
March 8, 2004


MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Notice of References Cited	Application/Control No. 09/708,181	Applicant(s)/Patent Under Reexamination RAN ET AL.	
	Examiner Po-Wel (Dennis) Chen	Art Unit 2876	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
✓	A	US-6,885,838 B1	12-2003	Brown et al.	715/501.1
✓	B	US-6,199,081 B1	03-2001	Meyerzon et al.	715/513
✓	C	US-6,181,342 B1	01-2001	Niblack, Carlton Wayne	345/835
✓	D	US-6,119,135 A	09-2000	Helfman, Jonathan Isaac	715/513
✓	E	US-6,366,906 B1	03-2002	Brown et al.	707/10
✓	F	US-6,486,895 B1	11-2002	Robertson et al.	345/776
✓	G	US-6,369,811 B1	04-2002	Graham et al.	345/784
✓	H	US-6,576,076 B1	08-2003	Smith et al.	709/224
✓	I	US-6,182,097 B1	01-2001	Hansen et al.	715/528
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages			
	U				
	V				
	W				
	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 807.05(b).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office
PTO-592 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 9

Interview Summary	Application No.	Applicant(s)	
	09/708,181	RAN ET AL	
	Examiner	Art Unit	
	Po-Wel (Dennis) Chen	2876	

All participants (applicant, applicant's representative, PTO personnel):

(1) Po-Wel (Dennis) Chen (PTO) (3) Yuval Yarvin

(2) Matt Bella (PTO) (4) Sanford Colb

Date of Interview: _____

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal (copy given to: 1) ☒ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____

Claim(s) discussed: all of record

Identification of prior art discussed: Miller (6,613,100) and Brown (6,665,838)

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☒ N/A.

Substance of interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: see below

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

The proposed amendment appears to overcome the prior art of record. The Examiner will determine whether an updated search will be necessary.

Matthew C. Bella

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Number	Hits	Search Text	DB	Time stamp
3	47	(web or internet) adj2 (page or site or document) same (downloader or thread) and (re-direct\$4 or redirect\$4)	USPAT; US-PGPUB	2004/03/08 13:46
-	62	345/\$.cols. and image adj3 server and (web or internet) and thumbnail	USPAT; US-PGPUB	2004/02/26 14:19
-	2	((("6613100") or ("5963964"))).FN.	USPAT	2004/02/26 14:25
-	0	6613100.URPN.	USPAT	2004/02/26 14:20
-	1	("6353448").FN.	USPAT	2004/02/26 14:32
-	1	6353448.URPN.	USPAT	2004/02/26 14:26
-	1	6353448.URPN.	USPAT	2004/02/26 14:32
-	239	345/\$.cols. and server and (thumbnail or image or icon) same (document or page) same (web or internet) same browser and (url or (hyper adj2 link))	USPAT	2004/02/26 14:59
-	13	(image or graphic) adj3 server and (thumbnail or icon or snapshot) adj4 (document or page) same (web or internet) same browser and (url or (hyper adj2 link))	USPAT	2004/03/04 19:14
-	3671	(thumbnail or icon or snapshot) same (web or internet or html) same (document or page)	USPAT; US-PGPUB	2004/03/04 20:35
-	432	(thumbnail) same (web or internet or html) same (document or page)	USPAT; US-PGPUB	2004/03/04 19:15
-	104	345/\$.cols. and (thumbnail) same (web or internet or html) same (document or page)	USPAT; US-PGPUB	2004/03/05 18:14
-	3	6369811.URPN.	USPAT	2004/03/04 20:08
-	3	6369811.URPN.	USPAT	2004/03/04 20:10
-	1	"5734835".FN.	USPAT	2004/03/04 20:20
-	88	(thumbnail or icon or snapshot) same (web or internet or html) same (document or page) and (multi. or multiple or plural\$4 or number) near2.download\$4	USPAT; US-PGPUB	2004/03/04 20:36
-	48	(thumbnail or icon or snapshot) same (web or internet or html) same (document or page) and (multi or multiple or plural\$4) near2.download\$4	USPAT; US-PGPUB	2004/03/05 20:56
-	1	("6647534").FN.	USPAT	2004/03/05 18:38
-	51	(thumbnail or (thumb adj2 nail)) and (redirect\$4 or re-direct\$4) and (web or internet)	USPAT	2004/03/05 19:09
-	14	image same hover\$4 same (link or hyperlink or url or hyper-link)	USPAT; US-PGPUB	2004/03/05 19:47
-	297	generat\$4 near2 (image or graphic or picture) near2 database	USPAT; US-PGPUB	2004/03/05 19:47
-	5	generat\$4 near2 (image or graphic or picture) near2 database and (thumbnail or (thumb adj2 nail)) and (web or internet) adj2 (page or document or site)	USPAT	2004/03/05 20:10
-	46	generat\$4 near2 (thumbnail or (thumb adj2 nail)) and (web or internet) adj2 (page or document or site)	USPAT	2004/03/05 20:11
-	42	generat\$4 near2 (thumbnail or (thumb adj2 nail)) and (web or internet) adj2 (page or document or site) and database	USPAT	2004/03/05 20:55
-	100	(multi or multiple or plural\$4) near2 download\$4 same (concurrent\$4 or simultaneous\$4)	USPAT; US-PGPUB	2004/03/05 20:58
-	282	(web or internet) adj2 (page or site or document) same (downloader or thread)	USPAT; US-PGPUB	2004/03/08 13:45

Search History 3/8/04 2:05:41 PM Page 1

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-	95	(web or internet) adj2 (page or site or document) same (download\$4 or thread) same (multi or multiple or plural\$4) same (concurrent\$4 or simultaneous\$4)	USPAT; US-PGPUB	2004/03/08 12:32
-	110	(web or internet) adj2 (page or site or document) same (download\$4 or thread) same (multi or multiple or plural\$4) same (concurrent\$4 or simultaneous\$4 or parallel)	USPAT; US-PGPUB	2004/03/08 12:34
-	15	(web or internet) adj2 (page or site or document) same thread same (multi or multiple or plural\$4) same (concurrent\$4 or simultaneous\$4 or parallel) same (download\$4 or retriev\$4 or fetch\$4)	USPAT; US-PGPUB	2004/03/08 13:43

Search History 3/8/04 2:05:41 PM Page 2

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L Number	Hits	Search Text	DE	Time stamp
-	196	html and (image or picture or visual or visualization) near2 (link or hyperlink or hyper-link) and 345.ccls.	USPAT/ US-PGPOB	2003/03/13 14:43
-	848	html and 345/\$.ccls.	USPAT	2003/03/17 15:34
-	83	html and 345/\$.ccls. and search and (eliminat\$4 or remov\$4 or delet\$4) same (link or hyperlink or hyper-link)	USPAT	2003/03/17 15:38
-	168	345/744.ccls.	USPAT	2003/03/17 16:20
-	312	(web\$5 or internet) and (eliminat\$4 or remov\$4 or delet\$4) near4 (link or hyperlink or hyperlink or url or address) same server	USPAT	2003/03/17 17:11
-	181	((eliminat\$4 or remov\$4 or delet\$4) near3 (link or hyperlink or hyperlink or url) and 707/\$.ccls.) and (internet or web)	USPAT	2003/03/20 11:34
-	48	(redirect\$4 or re-direct\$4) near2 (link or hyperlink or hyperlink or url) and 707/\$.ccls. and (internet or web)	USPAT	2003/03/20 12:28
-	109	(multi\$4 or several or many or various or number or numerous) near3 download\$4 and 707/\$.ccls.	USPAT	2003/03/20 12:51

Search History 3/20/03 6:05:31 PM Page 1
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

12/18/04
CE/18/04
(NE)

In re Application of : Shirli RAN et al.

Serial No. : 09/708,191

Filed : November 8, 2000

For : FRAMEWORK FOR PROVIDING VISUAL
CONTEXT TO WWW HYPERLINKS

Group Art Unit: 2697

Examiner: Po-Wei (Dennis) Chen

Hon. Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

RECEIVED

JUN 17 2004

Technology Center 2600

Sir:

AMENDMENT

The following amendment is in response to the outstanding Office Action mailed
March 11, 2004.

CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231

Date: June 10, 2004

JULIAN H. COHEN

(Type or print name of person mailing paper)

(Signature of person mailing paper)

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for presenting Internet information to a user comprising:
providing to a user a visual image of a web page containing at least one hyperlink;
and at least partially concurrently
providing a thumbnail visual image of another web ~~the home~~ page of at least one
web site which is represented by said at least one hyperlink via the Internet by employing an
image server that stores and provides said thumbnail visual image.
2. (Previously Presented) A method according to claim 1 and wherein said thumbnail visual
image is displayed alongside the visual image of said web page.
3. (Previously Presented) A method according to claim 1 and wherein said thumbnail visual
image is displayed within the visual image of said web page.
4. (Previously Presented) A method according to claim 1 and wherein a plurality of thumbnail
visual images represented by at least one hyperlink are displayed simultaneously along with said
visual image of a web page containing at least one hyperlink.
5. (Original) A method according to claim 1 and wherein said web page comprises an HTML
page.
6. (Previously Presented) A method according to claim 1 and wherein said providing a thumbnail

visual image comprises:

employing a web browser including visualization functionality which interfaces via the Internet with said image server.

7. (Previously Presented) A method according to claim 6 and wherein said visualization functionality is operative to download via the image server from an image database images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

8. (Cancelled)

9. (Previously Presented) A method according to claim 1 and wherein said providing a thumbnail visual image comprises:

employing a web browser which interfaces via the Internet with a web server including visualization functionality.

10. (Previously Presented) A method according to claim 9 and wherein said visualization functionality is operative to embed commands to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

11. (Previously Presented) A method according to claim 10 and wherein said annotated web page

includes the web page having within it thumbnail visual images of homepages of web sites referenced by hyperlinks contained in the web page.

12. (Previously Presented) A method according to claim 6 and wherein said visualization functionality comprises:

- generation of a list of hyperlinks from a web page;
- elimination of links which refer back to a web server sending said web page;
- determination of whether redirection links are present and if so, providing thumbnail visual images of ultimate destinations thereof; and
- providing thumbnail visual images of remaining hyperlinks.

13. (Original) A method according to claim 6 and wherein said visualization functionality comprises:

- receiving a list of hyperlinks;
- splitting a URL of each hyperlink into URL components including at least a path component and a host component;
- trimming a path component based on the consideration of finding the most representative image of a given web page; and
- constructing a new URL including a trimmed path component.

14. (Currently Amended) A method for generating an image server database of thumbnail visual images of web pages, the method comprising:

- receiving a list of URLs corresponding to said web pages, the thumbnail visual

images of which it is desired to supply to said image server database;

operating a multiplicity of downloaders simultaneously to retrieve from the Internet, web pages and embedded objects corresponding to URLs from said list;

causing a thumbnail generator to render retrieved web pages ~~retrieved~~ retrieved simultaneously by said multiplicity of downloaders; and

causing said thumbnail generator to shrink said rendered images of said retrieved web pages and supply them to said image server database.

15. (Currently Amended) A method according to claim 14 also comprising deleting executable content from said ~~retrieved~~ retrieved web pages.

16-17. (Canceled)

18. (Previously Presented) A method according to claim 1 and wherein said thumbnail visual image appears hovering over said hyperlink.

19. (Previously Presented) A method according to claim 2 and wherein said thumbnail visual image appears hovering over said hyperlink.

20. (Previously Presented) A method according to claim 3 and wherein said thumbnail visual image appears hovering over said hyperlink.

21. (Currently Amended) A system for presenting Internet information to a user comprising:

first functionality providing to a user a visual image of a web page containing at least one hyperlink; and

second functionality operative at least partially concurrently with said first functionality for providing a thumbnail visual image of ~~another web~~ the home page of at least one web site which is represented by said at least one hyperlink via the Internet by employing an image server that stores and provides said thumbnail visual image.

22. (Previously Presented) A system according to claim 21 and wherein said thumbnail visual image is displayed alongside the visual image of said web page.

23. (Previously Presented) A system according to claim 21 and wherein said thumbnail visual image is displayed within the visual image of said web page.

24. (Previously Presented) A system according to claim 21 and wherein a plurality of thumbnail visual images represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink.

25. (Original) A system according to claim 21 and wherein said web page comprises an HTML page.

26. (Previously Presented) A system according to claim 21 and wherein said second functionality comprises third functionality employing a web browser including visualization functionality which interfaces via the Internet with said image server.

27. (Previously Presented) A system according to claim 26 and wherein said visualization functionality is operative to download via the image server from an image database images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

28. (Cancelled)

29. (Original) A system according to claim 21 and wherein said second functionality comprises fourth functionality employing a web browser which interfaces via the Internet with a web server including visualization functionality.

30. (Previously Presented) A system according to claim 29 and wherein said visualization functionality is operative to embed commands to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

31. (Previously Presented) A system according to claim 30 and wherein said annotated web page includes the web page having within it thumbnail visual images of homepages of web sites referenced by hyperlinks contained in the web page.

32. (Previously Presented) A system according to claim 26 and wherein said visualization functionality comprises:

generation of a list of hyperlinks from a web page;

elimination of links which refer back to a web server sending said web page;
determination of whether redirection links are present and if so, providing
thumbnail visual images of ultimate destinations thereof; and
providing thumbnail visual images of remaining hyperlinks.

33. (Original) A system according to claim 26 and wherein said visualization functionality comprises:

receiving a list of hyperlinks;
splitting a URL of each hyperlink into URL components including at least a path
component and a host component;
trimming a path component based on the consideration of finding the most
representative image of a given web page; and
constructing a new URL including a trimmed path component.

34. (Currently Amended) A system for generating an image server database of thumbnail visual
images of web pages, the system comprising:

a ~~multiplicity~~ multiplicity of downloaders, each receiving at least one URL from
a list of URLs corresponding to said web pages, the thumbnail visual images of which it is
desired to supply to said image server database, and simultaneously retrieving from the Internet
web pages and embedded objects corresponding to said at least one URL; and

at least one thumbnail generator operative to render the web pages, shrink said
rendered images of the web pages and supply said rendered images to said image server database.

35. (Previously Presented) A system according to claim 34 and wherein said multiplicity of downloaders are operative to delete executable content from the web pages.

36-37. (Cancelled)

38. (Previously Presented) A system according to claim 21 and wherein said thumbnail visual image appears hovering over said hyperlink.

39. (Previously Presented) A system according to claim 22 and wherein said thumbnail visual image appears hovering over said hyperlink.

40. (Previously Presented) A system according to claim 23 and wherein said thumbnail visual image appears hovering over said hyperlink.

41. (New) A method for presenting Internet information to a user comprising:
providing to a user a visual image of a web page containing at least one hyperlink;
and at least partially concurrently
providing a thumbnail visual image of another web page of at least one web site
which is represented by said at least one hyperlink via the Internet by employing an image server
that stores and provides said thumbnail visual image,
said providing a thumbnail visual image comprising employing a web browser
which interfaces via the Internet with a web server, separated from said image server, including
visualization functionality, said visualization functionality being operative to embed commands

to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

42. (New) A method according to claim 41 and wherein said thumbnail visual image is displayed alongside the visual image of said web page.

43. (New) A method according to claim 41 and wherein said thumbnail visual image is displayed within the visual image of said web page.

44. (New) A method according to claim 41 and wherein a plurality of thumbnail visual images represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink.

45. (New) A method according to claim 41 and wherein said web page comprises an HTML page.

46. (New) A method according to claim 41 and wherein said annotated web page includes the web page having within it thumbnail-visual images of homepages of web sites referenced by hyperlinks contained in the web page.

47. (New) A method according to claim 41 and wherein said visualization functionality comprises:

generation of a list of hyperlinks from a web page;
elimination of links which refer back to a web server sending said web page;
determination of whether redirection links are present and if so, providing
thumbnail visual images of ultimate destinations thereof; and
providing thumbnail visual images of remaining hyperlinks.

48. (New) A method according to claim 41 and wherein said visualization functionality comprises:

receiving a list of hyperlinks;
splitting a URL of each hyperlink into URL components including at least a path
component and a host component;
trimming a path component based on the consideration of finding the most
representative image of a given web page; and
constructing a new URL including a trimmed path component.

49. (New) A method according to claim 41 and wherein said thumbnail visual image appears
hovering over said hyperlink.

50. (New) A method according to claim 42 and wherein said thumbnail visual image appears
hovering over said hyperlink.

51. (New) A method according to claim 43 and wherein said thumbnail visual image appears
hovering over said hyperlink.

52. (New) A system for presenting Internet information to a user comprising:

first functionality providing to a user a visual image of a web page containing at least one hyperlink; and

second functionality operative at least partially concurrently with said first functionality for providing a thumbnail visual image of another web page of at least one web site which is represented by said at least one hyperlink via the Internet by employing an image server that stores and provides said thumbnail visual image, said second functionality comprising third functionality employing a web browser which interfaces via the Internet with a web server, separated from said image server, including visualization functionality, said visualization functionality being operative to embed commands to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

53. (New) A system according to claim 52 and wherein said thumbnail visual image is displayed alongside the visual image of said web page.

54. (New) A system according to claim 52 and wherein said thumbnail visual image is displayed within the visual image of said web page.

55. (New) A system according to claim 52 and wherein a plurality of thumbnail visual images represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink.

56. (New) A system according to claim 52 and wherein said web page comprises an HTML page.

57. (New) A system according to claim 52 and wherein said annotated web page includes the web page having within it thumbnail visual images of homepages of web sites referenced by hyperlinks contained in the web page.

58. (New) A system according to claim 52 and wherein said visualization functionality comprises:

- generation of a list of hyperlinks from a web page;
- elimination of links which refer back to a web server sending said web page;
- determination of whether redirection links are present and if so, providing thumbnail visual images of ultimate destinations thereof; and
- providing thumbnail visual images of remaining hyperlinks.

59. (New) A system according to claim 52 and wherein said visualization functionality comprises:

- receiving a list of hyperlinks;
- splitting a URL of each hyperlink into URL components including at least a path component and a host component;
- trimming a path component based on the consideration of finding the most representative image of a given web page; and
- constructing a new URL including a trimmed path component.

60. (New) A system according to claim 52 and wherein said thumbnail visual image appears hovering over said hyperlink.

61. (New) A system according to claim 53 and wherein said thumbnail visual image appears hovering over said hyperlink.

62. (New) A system according to claim 54 and wherein said thumbnail visual image appears hovering over said hyperlink.

REMARKS

Applicant has carefully studied the outstanding Office Action in the present application. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Claims 1-7, 9-10, 21-27 and 29-30 stand rejected under 35 USC 102(e) as being anticipated by Brown et al. (US 6,665,838). Claims 8, 11, 28 and 31 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. in view of Miller. Claims 12 and 32 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. and further in view of Weinberg et al. and Smith et al. Claims 13 and 33 stand rejected under 35 USC 103(a) as being unpatentable over Brown and further in view of Chu and Mutschler, III et al. Claims 18-20 and 38-40 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. and further in view of Hansen et al. Claim 14 and 34 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. in view of Meyerzon et al. Claims 15 and 35 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. and Meyerzon et al. and further in view of Thomas.

Brown describes a method for presenting content in which a server retrieves a page requested by a client which includes a plurality of links, generates a set of thumbnails of linked pages, and sends the page and the set of thumbnails to the client. Miller describes an apparatus for displaying thumbnails of documents for alternative selection by a user. Miller describes providing thumbnails of the web page and thumbnails of the pages linked to the web page.

Applicants express their appreciation to Examiner Po-Wei Chen and SPE Matthew

Bella for the courtesy of an interview which was granted to one of the applicants, Yuval Yarom, and to applicants' representative, Sanford T. Colb (Reg. No. 26,856). The interview was held at the USPTO on June 3, 2004. The substance of the interview is set forth in the Interview Summary, Paper No. 9.

At the interview, the claims were discussed vis-à-vis the prior art references of Miller and Brown. Proposed amendments to the claims were also discussed. The Interview Summary states, "The proposed amendment appears to overcome the prior art of record. The Examiner will determine whether an updated search will be necessary."

Applicant has amended claims 1 and 21 to include the recitation of prior claims 8 and 28. In his remarks rejecting claim 8, the Examiner wrote "Brown does not disclose home pages of web sites. Miller discloses a method of displaying thumbnails of documents utilizing the function." While the applicant agrees that Miller teaches displaying thumbnails of documents, the applicant respectfully submits that Miller displays thumbnails of linked pages and does not show or suggest displaying thumbnails of the home pages of the linked pages, as recited in amended claims 1 and 21. Neither Brown nor Miller show or suggest "providing to a user a visual image of a web page containing at least one hyperlink and at least partially concurrently providing a thumbnail visual image of the home page of at least one web site which is represented by said at least one hyperlink" as recited in amended claims 1 and 21.

Claims 8 and 28 have been cancelled without prejudice.

Weinberg et al. describes a system and method for visualizing web sites and hierarchical data structures. Smith et al. describes a method for preserving referential integrity within web sites. Chu describes a system and method for displaying complex characters on a monitor. Mutschler III et al describes a method for extending HTML to support enterprise

application data binding. Hansen et al. describes a system and method for characterizing and visualizing usage patterns of a web site.

Meyerzon et al describes a method for tagging of documents retrieved from a computer network during a gathering project. Thomas describes an online monitoring search engine.

In his remarks rejecting claims 14 and 34, the Examiner wrote, "Brown discloses ... A method for generating a database of thumbnail images of web pages." Applicant had amended claims 14 and 34 to explicitly recite "an image server database". The applicant respectfully submits that Brown does not teach a method for generating an image server database of thumbnail images, as recited in amended claims 14 and 34. Brown teaches retrieving thumbnail images from a server which creates the thumbnail images as needed or retrieves them from a cache. The database referred to by Brown (in the abstract and column 2) is a database of documents, not a database of thumbnails. While Brown describes a cache containing thumbnails, Brown does not show or suggest generating an image server database of thumbnails. The Applicant respectfully submits that neither Brown nor Meyerzon, either alone or in combination, show or suggest the method of claim 14 or the system of claim 34.

Applicant has added new claims 41-62. New independent claim 41 is similar in scope to original claim 10. Dependent claims 42-51 are similar in scope to claims 2-5, 11-13 and 18-20, respectively, depending from new claim 41. New independent claim 52 is similar in scope to original claim 30. Dependent claims 53-62 are similar in scope to claims 22-25, 31-33 and 38-40, respectively, depending from new claim 52.

In his remarks rejecting claim 10, the Examiner wrote "Brown discloses a method of providing web page thumbnails from a server ... Proxy server functions as image server and

web server." The Applicant respectfully submits that Brown does not show or suggest using a separate web server and image server, as recited in each of claims 41 and 52.

The system and method of the present invention, as recited in claims 41 and 52, provide a separate web server and image server. According to the prior art method, wherein the image server and web server are combined, the web server and image server are each limited by the limitations of the other. Additionally, an image server provider would be required to adapt his technology to every web server. These limitations are not present in the system and method of the present invention. Additionally, the system and method of the present invention, which separates the image server from the web server, allows a single image server to capture and serve images of web pages from multiple web servers.

As discussed hereinabove, none of the prior art, either alone or in combination, show or suggest the features of the present invention as recited in the amended claims.

With reference to the above discussion, independent claims 1, 14, 21, 34, 41 and 52 are deemed patentable over the prior art of record and favorable reconsideration is respectfully requested. Claims 2-7, 9-13, 15, 18-20, 22-27, 29-33, 35, 38-40, 42-51 and 53-62 each depend directly or ultimately from one of the independent claims and recite additional patentable subject matter and therefore are deemed patentable.

Applicant has also amended claims 14, 15 and 34 to correct typographical errors.

Applicant reserves the right to pursue the claims as filed in the context of a continuation application.

In view of the foregoing, all of the claims are deemed to be allowable. Favorable reconsideration and allowance of the application is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'Julian Cohen', written over a horizontal line.

JULIAN COHEN
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,191	11/08/2000	Shih-Ren	U 013047-3	1297
	7390 06/22/2004			
Ladas & Parry 26 West 61st Street New York, NY 10023			EXAMINER CHEN, PO WHI	
			ART UNIT 2876	PAPER NUMBER 13
DATE MAILED: 06/22/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No. 09/708,191	Applicant(s) RAN ET AL.	
	Examiner Po-Wai (Dennis) Chen	Art Unit 2676	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

THE REPLY FILED 14 June 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.135(a). The date on which the petition under 37 CFR 1.135(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the abridged statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.162(a), or any extension thereof (37 CFR 1.161(d)), to avoid dismissal of the appeal.

2. ☒ The proposed amendment(s) will not be entered because:

(a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);

(b) ☐ they raise the issue of new matter (see Note below);

(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

(d) ☒ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

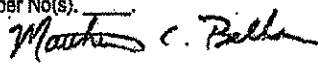
Claim(s) rejected: 1-15, 18-35 and 38-40

Claim(s) withdrawn from consideration: _____

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s).

10. ☐ Other: _____


MATTHEW C. BELLA
 SUPERVISOR, EXAMINER
 1600

Continuation Sheet (PTOL-303)
08/708,181

Application No.

Continuation of 2. NOTE: The new limitation added may overcome the prior art references. However, because a massive of information is related to the claimed invention, the Examiner would like to perform an updated search.



15/04
Hawkins

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Shirli RAN et al.

Serial No. : 09/708,191

Filed : November 8, 2000

For : FRAMEWORK FOR PROVIDING VISUAL
CONTEXT TO WWW HYPERLINKS

Group Art Unit: 2697

Examiner: Po-Wei (Dennis) Chen

RECEIVED

Hon. Commissioner of Patents and Trademarks

JUL 15 2004

P.O. Box 1450

Technology Center 2600

Alexandria, VA 22313-1450

Sir:

AMENDMENT

The following amendment is in response to the outstanding Office Action mailed

March 11, 2004.

CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231

Date: June 10, 2004

JULIAN H. COHEN

(Type or print name of person mailing paper)

(Signature of person mailing paper)

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for presenting Internet information to a user comprising:
providing to a user a visual image of a web page containing at least one hyperlink;
and at least partially concurrently
providing a thumbnail visual image of another web the home page of at least one
web site which is represented by said at least one hyperlink via the Internet by employing an
image server that stores and provides said thumbnail visual image.

2. (Previously Presented) A method according to claim 1 and wherein said thumbnail visual
image is displayed alongside the visual image of said web page.

3. (Previously Presented) A method according to claim 1 and wherein said thumbnail visual
image is displayed within the visual image of said web page.

4. (Previously Presented) A method according to claim 1 and wherein a plurality of thumbnail
visual images represented by at least one hyperlink are displayed simultaneously along with said
visual image of a web page containing at least one hyperlink.

5. (Original) A method according to claim 1 and wherein said web page comprises an HTML
page.

6. (Previously Presented) A method according to claim 1 and wherein said providing a thumbnail

visual image comprises:

employing a web browser including visualization functionality which interfaces via the Internet with said image server.

9
7. (Previously Presented) A method according to claim 6 and wherein said visualization functionality is operative to download via the image server from an image database images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

8. (Cancelled)

12
9. (Previously Presented) A method according to claim 1 and wherein said providing a thumbnail visual image comprises:

employing a web browser which interfaces via the Internet with a web server including visualization functionality.

13
10. (Previously Presented) A method according to claim 9 and wherein said visualization functionality is operative to embed commands to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

14
11. (Previously Presented) A method according to claim 10 and wherein said annotated web page

includes the web page having within it thumbnail visual images of homepages of web sites referenced by hyperlinks contained in the web page.

¹⁰
~~12~~ (Previously Presented) A method according to claim ⁸~~6~~ and wherein said visualization functionality comprises:

- generation of a list of hyperlinks from a web page;
- elimination of links which refer back to a web server sending said web page;
- determination of whether redirection links are present and if so, providing thumbnail visual images of ultimate destinations thereof; and
- providing thumbnail visual images of remaining hyperlinks.

¹¹
~~13~~ (Original) A method according to claim ⁸~~6~~ and wherein said visualization functionality comprises:

- receiving a list of hyperlinks;
- splitting a URL of each hyperlink into URL components including at least a path component and a host component;
- trimming a path component based on the consideration of finding the most representative image of a given web page; and
- constructing a new URL including a trimmed path component.

¹⁶
~~14~~ (Currently Amended) A method for generating an image server database of thumbnail visual images of web pages, the method comprising:

- receiving a list of URLs corresponding to said web pages, the thumbnail visual

images of which it is desired to supply to said image server database;

operating a multiplicity of downloaders simultaneously to retrieve from the Internet, web pages and embedded objects corresponding to URLs from said list;

causing a thumbnail generator to render retrieved web pages ~~retrieved~~ retrieved simultaneously by said multiplicity of downloaders; and

causing said thumbnail generator to shrink said rendered images of said retrieved web pages and supply them to said image server database.

¹⁷
18. (Currently Amended) A method according to claim ¹⁶ 14 also comprising deleting executable content from said ~~retrieved~~ retrieved web pages.

¹⁵
16-17. (Canceled)

¹⁵
18. (Previously Presented) A method according to claim 1 and wherein said thumbnail visual image appears hovering over said hyperlink.

³
19. (Previously Presented) A method according to claim 2 and wherein said thumbnail visual image appears hovering over said hyperlink.

⁵
20. (Previously Presented) A method according to claim ⁴ 3 and wherein said thumbnail visual image appears hovering over said hyperlink.

¹⁸
21. (Currently Amended) A system for presenting Internet information to a user comprising:

- 5 -
25

first functionality providing to a user a visual image of a web page containing at least one hyperlink; and

second functionality operative at least partially concurrently with said first functionality for providing a thumbnail visual image of another web ~~the home~~ page of at least one web site which is represented by said at least one hyperlink via the Internet by employing an image server that stores and provides said thumbnail visual image.

¹⁹
~~22~~ (Previously Presented) A system according to claim ¹⁸~~21~~ and wherein said thumbnail visual image is displayed alongside the visual image of said web page.

²⁴
~~23~~ (Previously Presented) A system according to claim ¹⁸~~21~~ and wherein said thumbnail visual image is displayed within the visual image of said web page.

²³
~~24~~ (Previously Presented) A system according to claim ¹⁸~~21~~ and wherein a plurality of thumbnail visual images represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink.

²⁴
~~25~~ (Original) A system according to claim ¹⁸~~21~~ and wherein said web page comprises an HTML page.

²⁵
~~26~~ (Previously Presented) A system according to claim ¹⁸~~21~~ and wherein said second functionality comprises third functionality employing a web browser including visualization functionality which interfaces via the Internet with said image server.

²⁶
~~27~~. (Previously Presented) A system according to claim ²⁵~~26~~ and wherein said visualization functionality is operative to download via the image server from an image database images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

[
28. (Cancelled)

²⁹
~~29~~. (Original) A system according to claim ¹⁸~~21~~ and wherein said second functionality comprises fourth functionality employing a web browser which interfaces via the Internet with a web server including visualization functionality.

³⁰
~~30~~. (Previously Presented) A system according to claim 29 and wherein said visualization functionality is operative to embed commands to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

31. (Previously Presented) A system according to claim 30 and wherein said annotated web page includes the web page having within it thumbnail visual images of homepages of web sites referenced by hyperlinks contained in the web page.

³²
~~32~~. (Previously Presented) A system according to claim ²⁵~~26~~ and wherein said visualization functionality comprises:

generation of a list of hyperlinks from a web page;

elimination of links which refer back to a web server sending said web page;
determination of whether redirection links are present and if so, providing
thumbnail visual images of ultimate destinations thereof; and
providing thumbnail visual images of remaining hyperlinks.

28
23. (Original) A system according to claim 25 and wherein said visualization functionality
comprises:

receiving a list of hyperlinks;
splitting a URL of each hyperlink into URL components including at least a path
component and a host component;
trimming a path component based on the consideration of finding the most
representative image of a given web page; and
constructing a new URL including a trimmed path component.

23
34. (Currently Amended) A system for generating an image server database of thumbnail visual
images of web pages, the system comprising:

a ~~multiplicity~~ multiplicity of downloaders, each receiving at least one URL from
a list of URLs corresponding to said web pages, the thumbnail visual images of which it is
desired to supply to said image server database, and simultaneously retrieving from the Internet
web pages and embedded objects corresponding to said at least one URL; and

at least one thumbnail generator operative to render the web pages, shrink said
rendered images of the web pages and supply said rendered images to said image server database.

³⁴
35. (Previously Presented) A system according to claim ³³34 and wherein said multiplicity of downloaders are operative to delete executable content from the web pages.

36-37. (Cancelled)

³⁸
38. (Previously Presented) A system according to claim ¹⁸21 and wherein said thumbnail visual image appears hovering over said hyperlink.

³⁹
39. (Previously Presented) A system according to claim ¹⁹22 and wherein said thumbnail visual image appears hovering over said hyperlink.

⁴⁰
40. (Previously Presented) A system according to claim ²¹23 and wherein said thumbnail visual image appears hovering over said hyperlink.

⁴¹
41. (New) A method for presenting Internet information to a user comprising:
providing to a user a visual image of a web page containing at least one hyperlink;
and at least partially concurrently
providing a thumbnail visual image of another web page of at least one web site
which is represented by said at least one hyperlink via the Internet by employing an image server
that stores and provides said thumbnail visual image,
said providing a thumbnail visual image comprising employing a web browser
which interfaces via the Internet with a web server, separated from said image server, including
visualization functionality; said visualization functionality being operative to embed commands

to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the web page and to provide to a user, via the web browser, an annotated web page.

³⁶
42. (New) A method according to claim ³⁵41 and wherein said thumbnail visual image is displayed alongside the visual image of said web page.

³⁸
43. (New) A method according to claim ³⁵41 and wherein said thumbnail visual image is displayed within the visual image of said web page.

⁴⁰
44. (New) A method according to claim ³⁵41 and wherein a plurality of thumbnail visual images represented by at least one hyperlink are displayed simultaneously along with said visual image of a web page containing at least one hyperlink.

⁴¹
45. (New) A method according to claim ³⁵41 and wherein said web page comprises an HTML page.

⁴²
46. (New) A method according to claim ³⁵41 and wherein said annotated web page includes the web page having within it thumbnail visual images of homepages of web sites referenced by hyperlinks contained in the web page.

⁴³
47. (New) A method according to claim ³⁵41 and wherein said visualization functionality comprises:

generation of a list of hyperlinks from a web page;

elimination of links which refer back to a web server sending said web page;

determination of whether redirection links are present and if so, providing thumbnail visual images of ultimate destinations thereof; and

providing thumbnail visual images of remaining hyperlinks.

44
48. (New) A method according to claim 41 and wherein said visualization functionality comprises:

receiving a list of hyperlinks;

splitting a URL of each hyperlink into URL components including at least a path component and a host component;

trimming a path component based on the consideration of finding the most representative image of a given web page; and

constructing a new URL including a trimmed path component.

45
49. (New) A method according to claim 41 and wherein said thumbnail visual image appears hovering over said hyperlink.

30
50. (New) A method according to claim 42 and wherein said thumbnail visual image appears hovering over said hyperlink.

38
51. (New) A method according to claim 43 and wherein said thumbnail visual image appears hovering over said hyperlink.

⁴⁶
~~52~~. (New) A system for presenting Internet information to a user comprising:
 first functionality providing to a user a visual image of a web page containing
 at least one hyperlink; and
 second functionality operative at least partially concurrently with said first
 functionality for providing a thumbnail visual image of another web page of at least one web
 site which is represented by said at least one hyperlink via the Internet by employing an
 image server that stores and provides said thumbnail visual image, said second functionality
 comprising third functionality employing a web browser which interfaces via the Internet
 with a web server, separated from said image server, including visualization functionality,
 said visualization functionality being operative to embed commands to the web
 browser to download, via said image server, thumbnail visual images of web pages which
 represent hyperlinks contained in the web page and to provide to a user, via the web browser,
 an annotated web page.

⁴⁷
~~53~~. (New) A system according to claim ⁴⁶~~52~~ and wherein said thumbnail visual image is
 displayed alongside the visual image of said web page.

⁴⁹
~~54~~. (New) A system according to claim ⁴⁶~~52~~ and wherein said thumbnail visual image is
 displayed within the visual image of said web page.

⁵¹
~~55~~. (New) A system according to claim ⁴⁶~~52~~ and wherein a plurality of thumbnail visual
 images represented by at least one hyperlink are displayed simultaneously along with said visual
 image of a web page containing at least one hyperlink.

⁸³
~~56~~ (New) A system according to claim ⁴⁶~~52~~ and wherein said web page comprises an HTML page.

⁵³
~~57~~ (New) A system according to claim ⁴⁶~~52~~ and wherein said annotated web page includes the web page having within it thumbnail visual images of homepages of web sites referenced by hyperlinks contained in the web page.

⁵⁴
~~58~~ (New) A system according to claim ⁴⁶~~52~~ and wherein said visualization functionality comprises:

generation of a list of hyperlinks from a web page;
elimination of links which refer back to a web server sending said web page;
determination of whether redirection links are present and if so, providing thumbnail visual images of ultimate destinations thereof; and
providing thumbnail visual images of remaining hyperlinks.

⁵⁵
~~59~~ (New) A system according to claim ⁴⁶~~52~~ and wherein said visualization functionality comprises:

receiving a list of hyperlinks;
splitting a URL of each hyperlink into URL components including at least a path component and a host component;
trimming a path component based on the consideration of finding the most representative image of a given web page; and
constructing a new URL including a trimmed path component.

⁴⁶
60. (New) A system according to claim 52 and wherein said thumbnail visual image appears hovering over said hyperlink.

⁴⁷
61. (New) A system according to claim 53 and wherein said thumbnail visual image appears hovering over said hyperlink.

⁴⁹
62. (New) A system according to claim 54 and wherein said thumbnail visual image appears hovering over said hyperlink.

REMARKS

Applicant has carefully studied the outstanding Office Action in the present application. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Claims 1-7, 9-10, 21-27 and 29-30 stand rejected under 35 USC 102(e) as being anticipated by Brown et al. (US 6,665,838). Claims 8, 11, 28 and 31 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. in view of Miller. Claims 12 and 32 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. and further in view of Weinberg et al. and Smith et al. Claims 13 and 33 stand rejected under 35 USC 103(a) as being unpatentable over Brown and further in view of Chu and Mutschler, III et al. Claims 18-20 and 38-40 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. and further in view of Hansen et al. Claim 14 and 34 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. in view of Meyerzon et al. Claims 15 and 35 stand rejected under 35 USC 103(a) as being unpatentable over Brown et al. and Meyerzon et al. and further in view of Thomas.

Brown describes a method for presenting content in which a server retrieves a page requested by a client which includes a plurality of links, generates a set of thumbnails of linked pages, and sends the page and the set of thumbnails to the client. Miller describes an apparatus for displaying thumbnails of documents for alternative selection by a user. Miller describes providing thumbnails of the web page and thumbnails of the pages linked to the web page.

Applicants express their appreciation to Examiner Po-Wei Chen and SPE Matthew

Bella for the courtesy of an interview which was granted to one of the applicants, Yuval Yarom, and to applicants' representative, Sanford T. Colb (Reg. No. 26,856). The interview was held at the USPTO on June 3, 2004. The substance of the interview is set forth in the Interview Summary, Paper No. 9.

At the interview, the claims were discussed vis-à-vis the prior art references of Miller and Brown. Proposed amendments to the claims were also discussed. The Interview Summary states, "The proposed amendment appears to overcome the prior art of record. The Examiner will determine whether an updated search will be necessary."

Applicant has amended claims 1 and 21 to include the recitation of prior claims 8 and 28. In his remarks rejecting claim 8, the Examiner wrote "Brown does not disclose home pages of web sites. Miller discloses a method of displaying thumbnails of documents utilizing the function." While the applicant agrees that Miller teaches displaying thumbnails of documents, the applicant respectfully submits that Miller displays thumbnails of linked pages and does not show or suggest displaying thumbnails of the home pages of the linked pages, as recited in amended claims 1 and 21. Neither Brown nor Miller show or suggest "providing to a user a visual image of a web page containing at least one hyperlink and at least partially concurrently providing a thumbnail visual image of the home page of at least one web site which is represented by said at least one hyperlink" as recited in amended claims 1 and 21.

Claims 8 and 28 have been cancelled without prejudice.

Weinberg et al. describes a system and method for visualizing web sites and hierarchical data structures. Smith et al. describes a method for preserving referential integrity within web sites. Chu describes a system and method for displaying complex characters on a monitor. Mutschler III et al describes a method for extending HTML to support enterprise

application data binding. Hansen et al. describes a system and method for characterizing and visualizing usage patterns of a web site.

Meyerzon et al describes a method for tagging of documents retrieved from a computer network during a gathering project. Thomas describes an online monitoring search engine.

In his remarks rejecting claims 14 and 34, the Examiner wrote, "Brown discloses ... A method for generating a database of thumbnail images of web pages." Applicant had amended claims 14 and 34 to explicitly recite "an image server database". The applicant respectfully submits that Brown does not teach a method for generating an image server database of thumbnail images, as recited in amended claims 14 and 34. Brown teaches retrieving thumbnail images from a server which creates the thumbnail images as needed or retrieves them from a cache. The database referred to by Brown (in the abstract and column 2) is a database of documents, not a database of thumbnails. While Brown describes a cache containing thumbnails, Brown does not show or suggest generating an image server database of thumbnails. The Applicant respectfully submits that neither Brown nor Meyerzon, either alone or in combination, show or suggest the method of claim 14 or the system of claim 34.

Applicant has added new claims 41-62. New independent claim 41 is similar in scope to original claim 10. Dependent claims 42-51 are similar in scope to claims 2-5, 11-13 and 18-20, respectively, depending from new claim 41. New independent claim 52 is similar in scope to original claim 30. Dependent claims 53-62 are similar in scope to claims 22-25, 31-33 and 38-40, respectively, depending from new claim 52.

In his remarks rejecting claim 10, the Examiner wrote "Brown discloses a method of providing web page thumbnails from a server ... Proxy server functions as image server and

web server." The Applicant respectfully submits that Brown does not show or suggest using a separate web server and image server, as recited in each of claims 41 and 52.

The system and method of the present invention, as recited in claims 41 and 52, provide a separate web server and image server. According to the prior art method, wherein the image server and web server are combined, the web server and image server are each limited by the limitations of the other. Additionally, an image server provider would be required to adapt his technology to every web server. These limitations are not present in the system and method of the present invention. Additionally, the system and method of the present invention, which separates the image server from the web server, allows a single image server to capture and serve images of web pages from multiple web servers.

As discussed hereinabove, none of the prior art, either alone or in combination, show or suggest the features of the present invention as recited in the amended claims.

With reference to the above discussion, independent claims 1, 14, 21, 34, 41 and 52 are deemed patentable over the prior art of record and favorable reconsideration is respectfully requested. Claims 2-7, 9-13, 15, 18-20, 22-27, 29-33, 35, 38-40, 42-51 and 53-62 each depend directly or ultimately from one of the independent claims and recite additional patentable subject matter and therefore are deemed patentable.

Applicant has also amended claims 14, 15 and 34 to correct typographical errors.

Applicant reserves the right to pursue the claims as filed in the context of a continuation application.

In view of the foregoing, all of the claims are deemed to be allowable. Favorable reconsideration and allowance of the application is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'Julian Cohen', written over a horizontal line.

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Notice of Allowability	Application No.	Applicant(s)	
	08/708,181	RAN ET AL	
	Examiner	Art Unit	
	Po-Wel (Dennis) Chen	2878	

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to July 08, 2004.
2. ☒ The allowed claim(s) is/are 1-7, 9-15, 18-27, 29-35 and 38-52.
3. ☒ The drawings filed on 08 November 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has **THREE MONTHS FROM THE "MAILING DATE"** of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in **ABANDONMENT** of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ Including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(g)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

<ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material 	<ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____
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Application/Control Number: 09/708,191
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DETAILED ACTION

Claims 1-7, 9-15, 18-27, 29-35 and 38-62 are pending in this application. Claims 1, 14, 21, 34, 41 and 52 are independent claims.

The present title of the invention is "Framework for Providing Visual Context to WWW Hyperlinks".

Allowable Subject Matter

1. Claims 1-7, 9-15, 18-27, 29-35 and 38-62 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Prior art references do not anticipate or suggest the limitation "providing a thumbnail visual image of the home page of at least one web site which is represented by said at least one hyperlink via the Internet by employing an image server that stores and provides said thumbnail visual image" in combination with the other claim limitations in claims 1 and 21.

Prior art references do not anticipate or suggest the limitation "causing a thumbnail generator to render retrieved web pages retrieved simultaneously by said multiplicity of downloaders; and causing said thumbnail generator to shrink said rendered image of said retrieved web pages and supply them to said image server database" in combination with the other claim limitations in claims 14 and 34.

Prior art references do not anticipate or suggest the limitation "providing a thumbnail visual image comprising employing a web browser which interfaces via the Internet with a web server, separated from said image server, including visualization functionality, said visualization functionality being operative to embed commands to the web browser to download, via said image server, thumbnail visual images of web pages which represent hyperlinks contained in the

Application/Control Number: 09/708,191

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Art Unit: 2676

web page and to provide to a user, via the web browser, an annotated web page" in combination with the other claim limitations in claims 41 and 52.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-8365. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C Bella can be reached on (703) 308-6829. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Po-Wei (Dennis) Chen
Examiner
Art Unit 2676

Po-Wei (Dennis) Chen
September 20, 2004

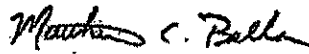

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

EXHIBIT B



US006613100B2

(12) **United States Patent**
Miller

(10) **Patent No.:** **US 6,613,100 B2**
(45) **Date of Patent:** ***Sep. 2, 2003**

(54) **METHOD AND APPARATUS FOR
DISPLAYING MINIATURIZED GRAPHICAL
REPRESENTATIONS OF DOCUMENTS FOR
ALTERNATIVE VIEWING SELECTION**

(75) Inventor: **John David Miller, Beaverton, OR
(US)**

(73) Assignee: **Intel Corporation, Santa Clara, CA
(US)**

(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **08/979,504**

(22) Filed: **Nov. 26, 1997**

(65) **Prior Publication Data**

US 2002/0010718 A1 Jan. 24, 2002

(51) Int. Cl.⁷ **G06F 7/00**

(52) U.S. Cl. **715/526; 715/513; 345/763;
345/810; 345/835; 345/840**

(58) **Field of Search** **345/335, 763,
345/810, 835, 838, 840, 348; 707/526,
501, 513**

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Primary Examiner—Stephen S. Hong

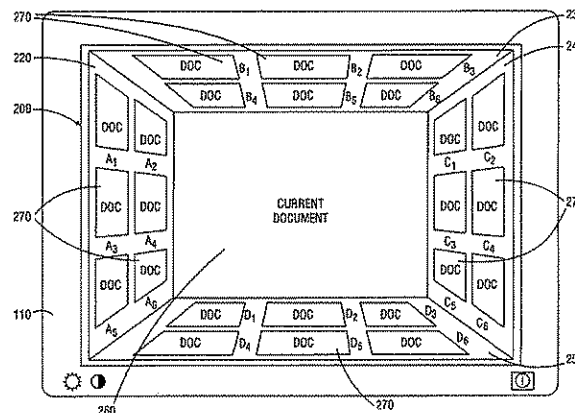
Assistant Examiner—Cesar B Paula

(74) Attorney, Agent, or Firm—Blakely, Sokoloff, Taylor & Zafman LLP

(57) **ABSTRACT**

An apparatus for displaying miniaturized graphical representations (i.e., thumbnails) of documents for alternative viewing selection by a user. A current document is displayed on a display panel of a graphical user interface (GUI) for viewing and/or manipulation by a user. The GUI further includes a plurality of selection panels that collectively form a border around the current document of the display panel. Disposed on these selection panels are a plurality of thumbnails of other documents that are deemed relevant to the current document by a predetermined, user-defined criterion. Selection of one of these thumbnails conveniently displays the document represented by such thumbnail to be displayed on the display panel in lieu of the current document. Advantageously, documents deemed relevant to a currently displayed document are easily accessible to the user.

48 Claims, 6 Drawing Sheets



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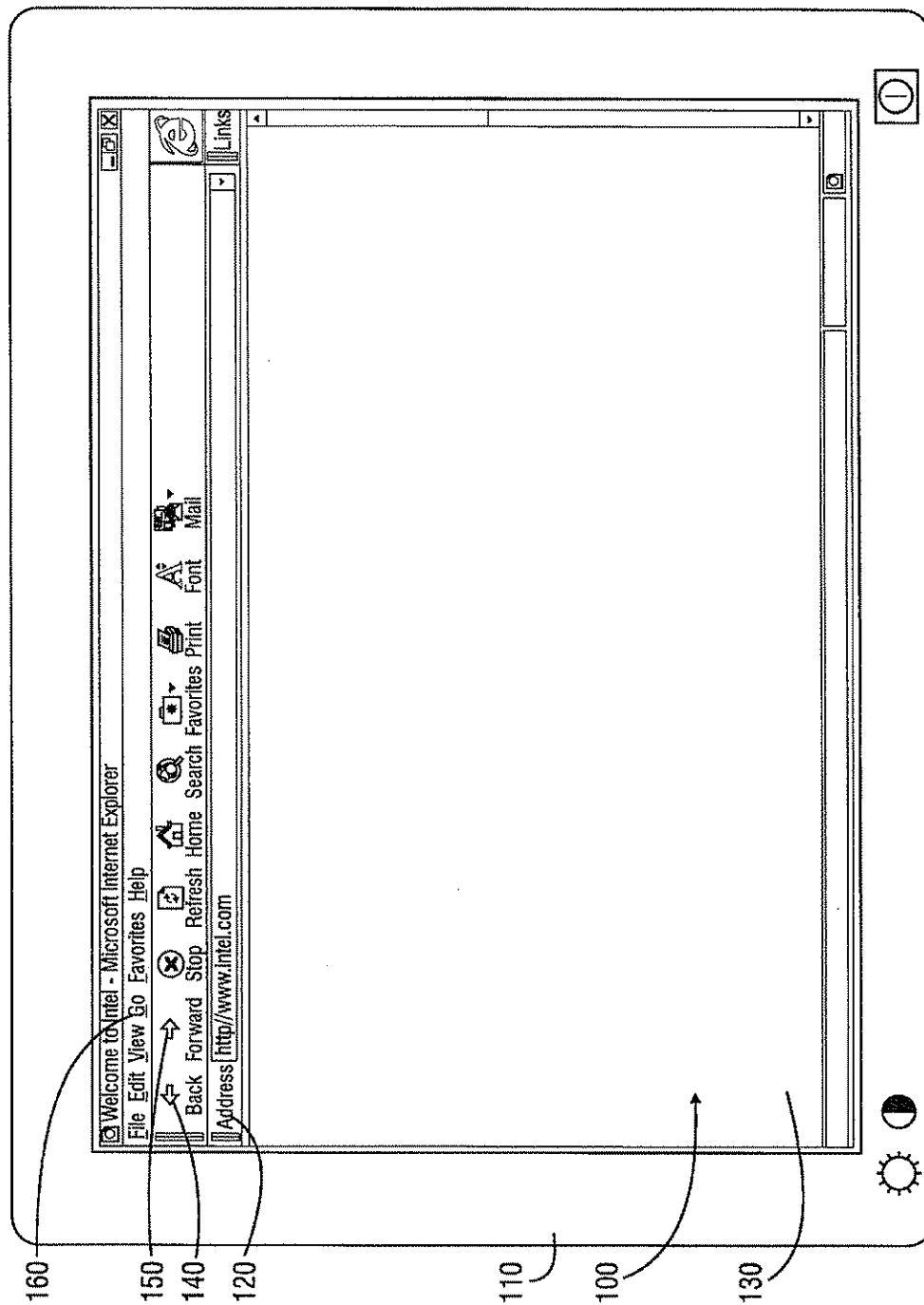
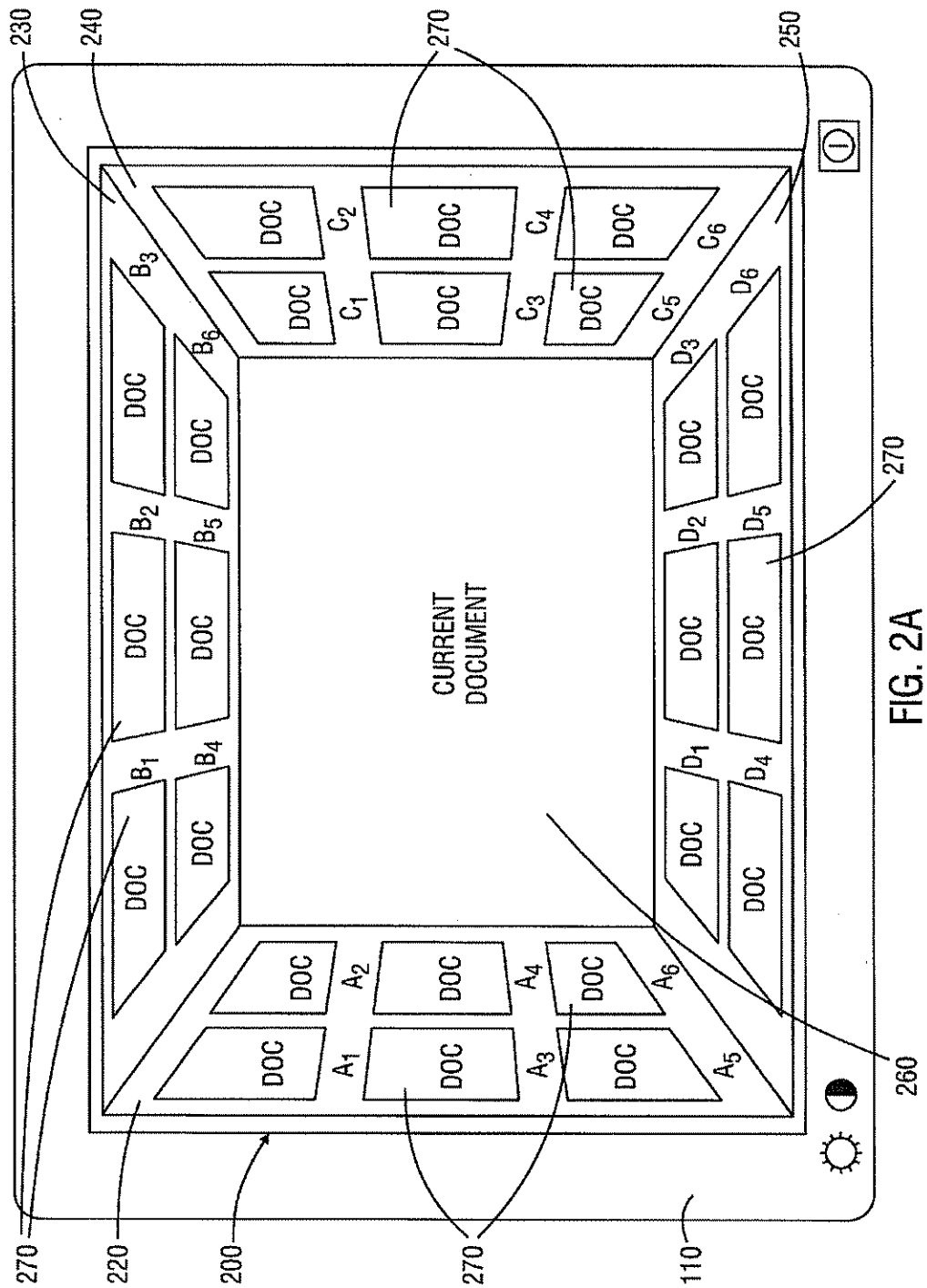


FIG. 1 (prior art)

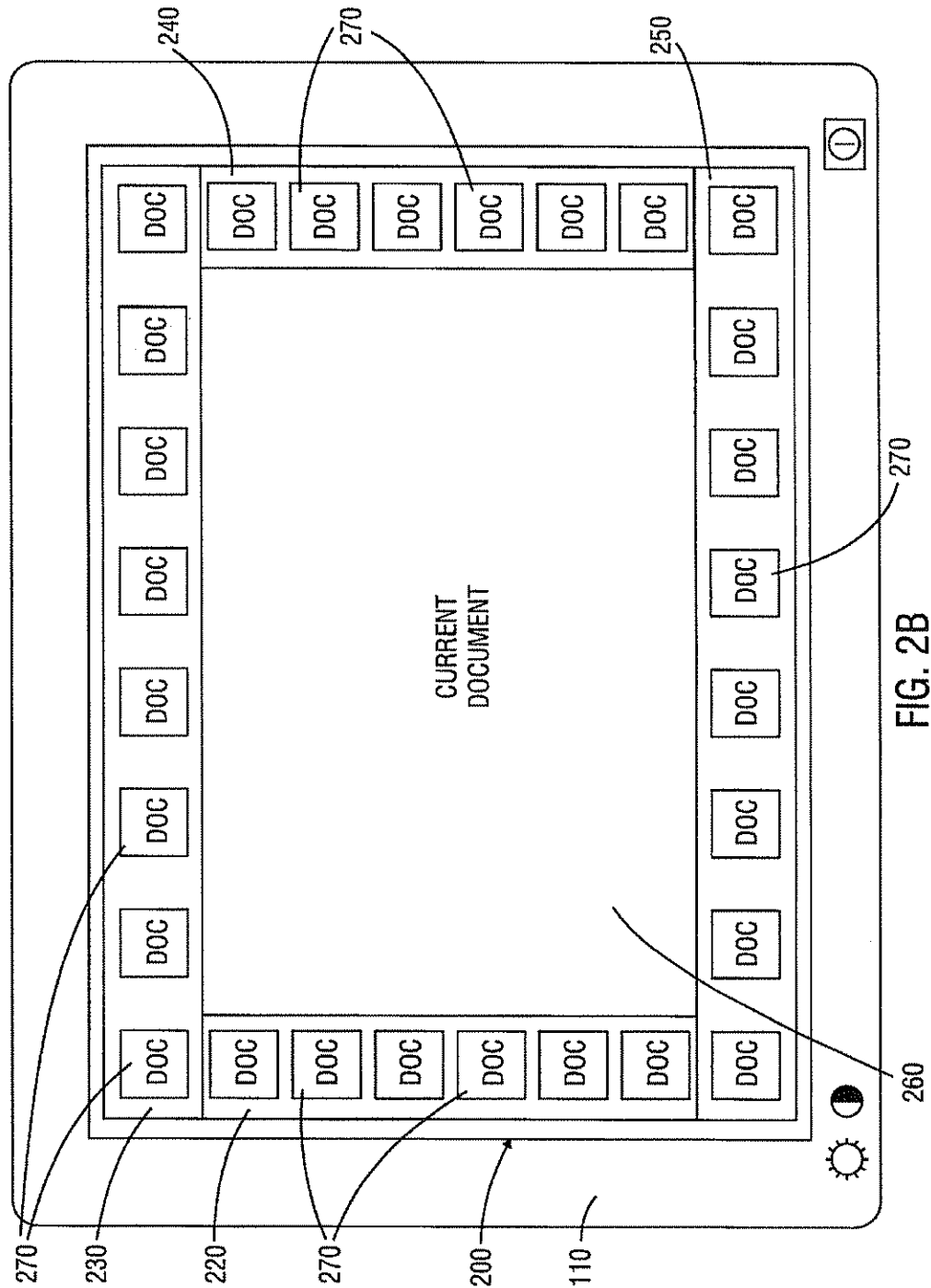


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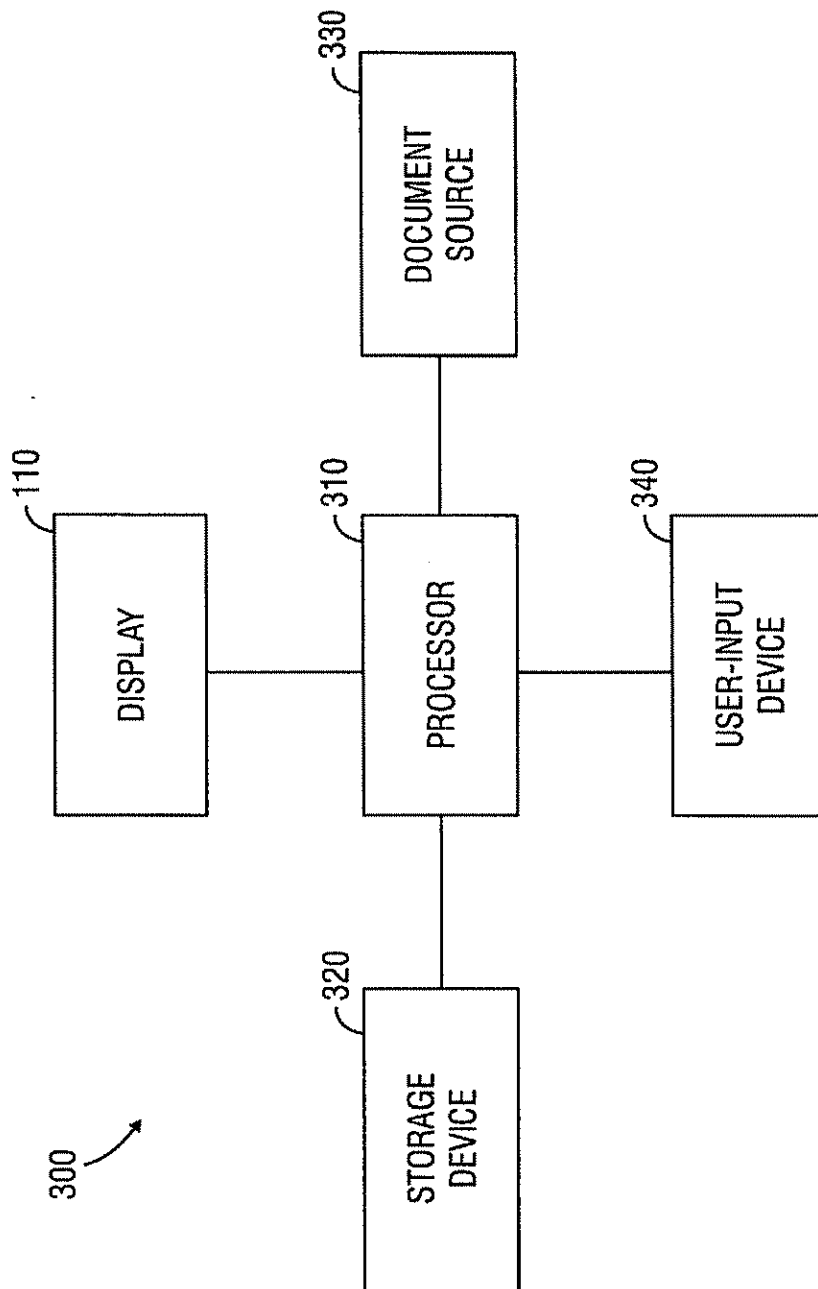


FIG. 3

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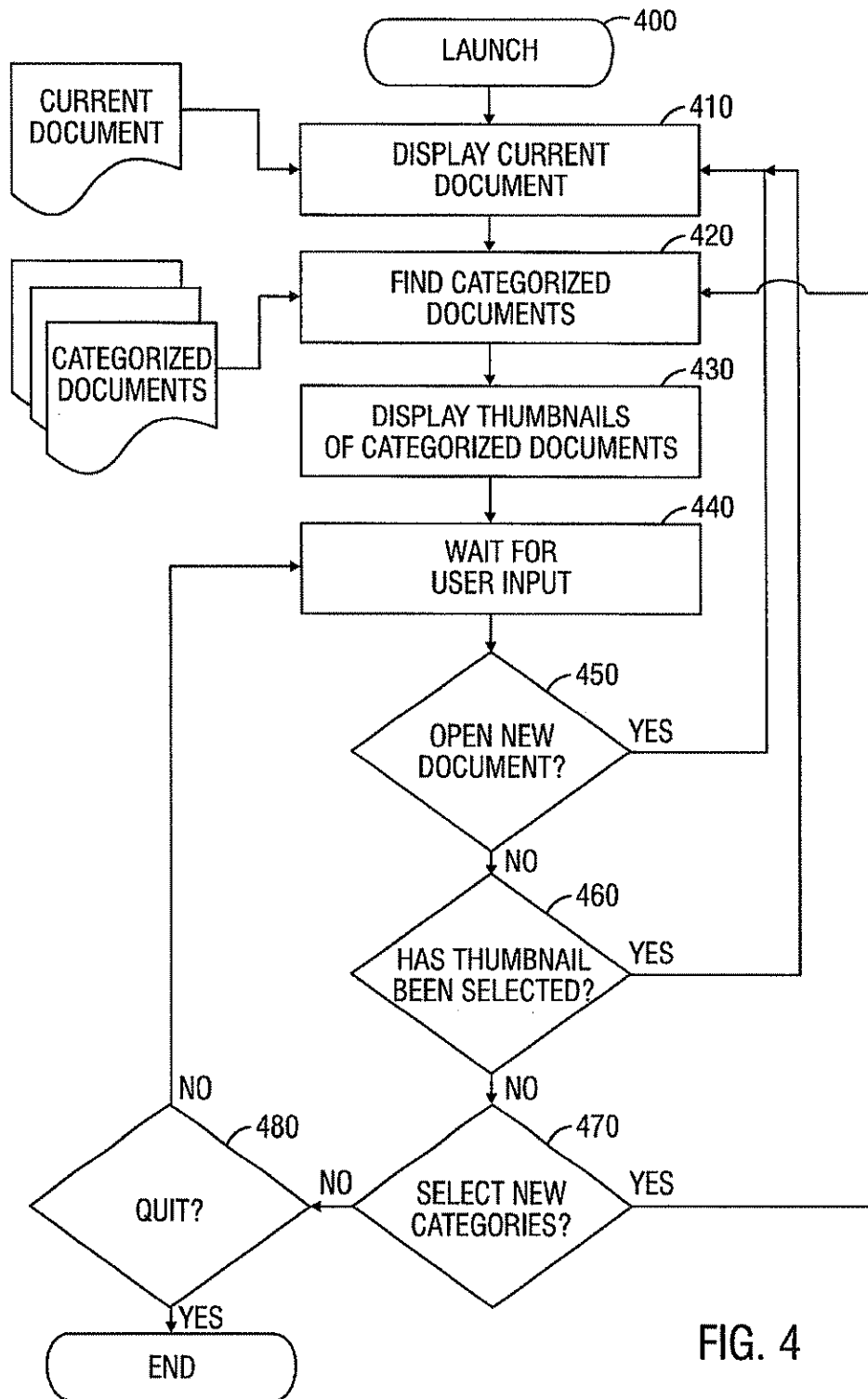


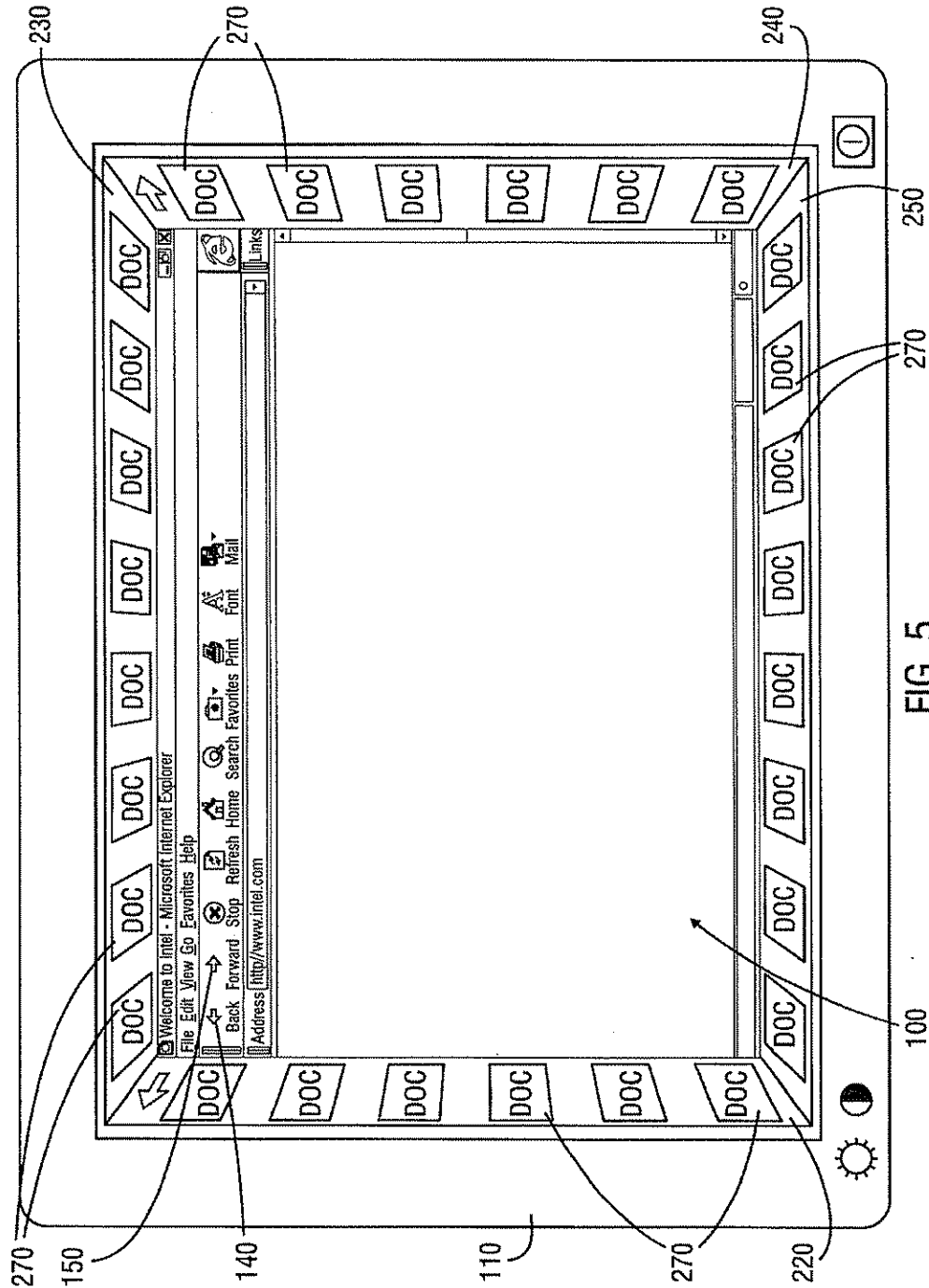
FIG. 4

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METHOD AND APPARATUS FOR DISPLAYING MINIATURIZED GRAPHICAL REPRESENTATIONS OF DOCUMENTS FOR ALTERNATIVE VIEWING SELECTION

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to computer system applications and, more particularly, to a method and apparatus for displaying miniaturized graphical representations (i.e., thumbnails) of documents for alternative viewing selection by a user.

2. Description of the Related Art

The Internet, a vast network of computer systems worldwide, has undergone astronomical growth over the past several years. A significant contribution to this growth has been the introduction and widespread use of web browsers, which, from a software point of view, interface a computer user to the Internet. The web browser permits the user to select, view, and interact with a myriad of informational documents (i.e., web pages) from various network servers coupled to the Internet. The web browser effectively places this selection of vast information at the user's fingertips in a matter of seconds. As a result, the web browser has become one of the most popular computer applications in use today.

Referring to FIG. 1, a typical prior art web browser 100, such as Microsoft Internet Explorer 3.02, is shown displayed on a computer screen 110. Generally, when the user desires to access a specific web site of the Internet, he or she enters a Uniform Resource Locator (URL) in an entry field 120 of the web browser 100. The URL is an address that uniquely identifies a specific web site and will cause the web browser 100 to download the main web page (commonly referred to as a "home" page) of that web site. The web browser 100 will then subsequently display the downloaded home page in its display section 130 for viewing by the user. The home page provides the user with various sorts of information, and, typically, also provides options to select "links" to other web pages of the currently accessed web site and/or links to alternative web sites.

As a user "surfs" the Internet by accessing various web pages through the selection of these links, the web browser 100 records a list (or "stack") of URLs corresponding to the web pages accessed by the user. The user may desire to re-visit a previously viewed web page for a variety of reasons (e.g., to access more information from the page, have access to alternate links, etc.). For this reason, the web browser 100 includes a "back" button 140 and a "forward" button 150 to enable the user to re-visit a previously accessed web page by sequentially accessing such web pages via the buffered stack of URLs. These "back" and "forward" buttons 140, 150 provide some convenience to the user by preventing the need to re-enter the URL of the previously visited web page in the entry field 120. However, while these buttons 140, 150 may provide some ease in accessing previously visited web pages, their use also poses several disadvantages to the user. The buffered stack of URLs is effectively transparent to the user when using these buttons 140, 150. Accordingly, the user cannot visualize the buffered stack and, thus, must rely on his or her memory for a rough estimate of where the previously accessed web page's URL appears in the stack. Generally, the user will tediously actuate the "back" button 140 until the desired web page reappears in the display section 130. However, this

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action tends to be inefficient since it can take considerable time to reload (within the display section 130) each sequentially accessed web page while using the "back" button 140. Additionally, if the user desires to access a web page that appears at the beginning of a lengthy buffered stack, he or she wastes considerable time "stepping" through web pages that are intermediate in the URL stack before being able to access the desired web page. In some cases, it may have been quicker to manually enter the URL of the desired web page into the entry field 120, thus causing the arduous effort and time expended of "blindly" stepping through the stack of URLs to be completely useless.

An additional feature of the web browser 100, which may alleviate some of the disadvantages associated with the "back" and "forward" buttons 140, 150, is a "Go" feature 160. This feature allows the user to view and select from the buffered stack of URLs to re-visit a previously accessed web page. However, the "Go" feature 160 also suffers from its own disadvantages. That is, it does not constantly permit the display of the buffered stack contemporaneously with the display of the currently accessed web page, and, thus inconveniently requires the user to "pull down" a menu to view the buffered stack. Additionally, the "Go" feature 160 only displays a subset of about 5 URLs from the entire buffered stack of URLs (which could easily be 20-30 URLs, for example). Accordingly, the user is not provided with a full view of the URL stack and must tediously step through intermediate URLs of the displayed stack to view the entire stack. Therefore, this feature, while being somewhat convenient for accessing one of the 5 displayed URLs of the stack, still does not provide any visualization for the other URLs in the stack. Accordingly, the "Go" feature 160 does not provide the user any additional advantage over the "back" and "forward" buttons 140, 150 for those URLs that are not displayed.

Some "new generation" web browsers (currently being released) now provide "back list" and "forward list" options that display a list of the URLs either back or forward, respectively, in the URL stack for selection by the user. However, these options also inconveniently require the user to "pull down" a menu to view the list of URLs. Accordingly, these options, like that of the "Go" feature 160, do not permit the constant display of the URL stack contemporaneously with the currently accessed web page. Furthermore, these lists of URLs do not provide any actual visualization of the web pages that they represent. This becomes particularly difficult when the user desires to access several web pages of a particular web site, where only subtle distinctions between such web pages are seen in the URL. Accordingly, the user may waste a significant amount of time accessing undesired web pages by improper URL selection via these lists of URLs.

The present invention is directed to overcoming, or at least reducing the effects of, one or more of the problems set forth above.

SUMMARY OF THE INVENTION

In one aspect of the present invention, a method is provided for displaying miniaturized graphical representations of documents for alternative viewing selection by a user. The method includes displaying a current document of a computer application and determining if at least one other document is relevant to the current document based upon a predetermined criterion. The method further includes displaying a miniaturized graphical representation, uniquely identifying the at least one other document, contemporane-

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ously with the current document in response to determining that the at least one other document is relevant to the current document.

In another aspect of the present invention, an apparatus includes a display screen adapted to display a current document of a computer application and a processor adapted to determine if at least one other document is relevant to the current document based upon a predetermined criterion. The processor is further adapted to display a miniaturized graphical representation, uniquely identifying the at least one other document, contemporaneously with the current document providing that the at least one other document was deemed relevant to the current document.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects and advantages of the invention will become apparent upon reading the following detailed description and upon reference to the drawings in which:

FIG. 1 illustrates a typical prior art web browser for accessing web pages from the Internet;

FIG. 2A shows a three-dimensional graphical user interface for displaying miniaturized graphical representations of documents for alternative viewing selection in accordance with one embodiment of the present invention;

FIG. 2B shows a two-dimensional graphical user interface in accordance with another embodiment of the present invention;

FIG. 3 depicts a block diagram of an apparatus for implementing the graphical user interface of FIGS. 2A and 2B;

FIG. 4 shows a flowchart for the process used by the apparatus of FIG. 3 for implementing the graphical user interface of FIGS. 2A and 2B; and

FIG. 5 shows the graphical user interface of FIG. 2 used in conjunction with the prior art web browser of FIG. 1.

While the invention is susceptible to various modifications and alternative forms, specific embodiments thereof have been shown by way of example in the drawings and are herein described in detail. It should be understood, however, that the description herein of specific embodiments is not intended to limit the invention to the particular forms disclosed, but on the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

DETAILED DESCRIPTION OF SPECIFIC EMBODIMENTS

Illustrative embodiments of the invention are described below. In the interest of clarity, not all features of an actual implementation are described in this specification. It will of course be appreciated that in the development of any such actual embodiment, numerous implementation-specific decisions must be made to achieve the developers' specific goals, such as compliance with system-related and business-related constraints, which will vary from one implementation to another. Moreover, it will be appreciated that such a development effort might be complex and time-consuming, but would nonetheless be a routine undertaking for those of ordinary skill in the art having the benefit of this disclosure.

Turning now to the drawings, and specifically referring to FIG. 2A, a graphical user interface (GUI) 200 is shown displayed on a computer screen 110. In accordance with one embodiment, the GUI 200 appears in the shape of a three-dimensional cuboid, and is oriented on the computer screen

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110 such that its interior is viewed from an open end (i.e., a missing surface) of the cuboid. That is, it is as if the computer user is peering inside the cuboid via its one missing surface.

The GUI 200 comprises a plurality of selection panels 220-250 that collectively form a border around a display panel 260 when viewed by the user. The display panel 260 displays a particular document of a computer application that is currently being viewed and/or manipulated by the user. The document displayed on the display panel 260 could be from various types of computer applications. For example, the document could be a web page from a web browser, a document from a word processor or spreadsheet application, or an e-mail message from an e-mail application. It will be appreciated that several other document types (from various other computer applications) could also be displayed, and, thus, the present invention need not be limited to the aforementioned examples.

Each of the selection panels 220-250 surrounding the display panel 260 have disposed thereon a plurality of thumbnails 270 for selection by the user. These thumbnails 270 are miniaturized graphical representations of documents that may be relevant to the current document displayed on the display panel 260. Essentially, the thumbnail 270 is a minuscule picture of an actual document, which serves to uniquely identify the document by mere visual inspection of the thumbnail 270. It is important to note that the thumbnail 270 should not be confused with a conventional "icon", which is a minute graphical symbol that is typically used as a "shortcut" to a particular computer application. Such icons are mere generic representations of a particular computer application and do not serve to uniquely distinguish between specific documents of a computer application in a visually perceptible manner.

The thumbnails 270 provide the user quick access to documents as alternatives to the current document displayed on the display panel 260. Accordingly, when the user desires to access one of these documents, the user selects the appropriate thumbnail 270 via a user-input device (not shown), such as a computer mouse, trackball, etc. Such selection subsequently causes the desired document to be displayed on the display panel 260 for viewing and/or manipulation by the user.

As opposed to presenting the GUI 200 to the user in a three-dimensional manner as illustrated in FIG. 2A, in an alternative embodiment, the GUI 200 could be displayed two-dimensionally as shown in FIG. 2B. Each of these two configurations provides its own unique advantages to the user. For instance, the three-dimensional cuboid configuration of FIG. 2A "draws" the user's attention to the current document on the display panel 260, thereby reducing the likelihood of the user becoming distracted by the thumbnails 270 on the selection panels 220-250. The two-dimensional configuration of FIG. 2B, on the other hand, provides a larger display of the current document on the display panel 260. Thus, in this two-dimensional configuration, the user can advantageously view more information from the current document at one time. Furthermore, as opposed to providing the user with only a single type of configuration (i.e., with a two or three-dimensional configuration only), the present invention could be configured such that the user could select between the two or three-dimensional configurations according to his or her preference.

The GUI 200 can be used in conjunction with a plurality of different computer applications. That is, it can interact with one computer application, such as a word processor,

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and display thumbnails 270 corresponding to word processing documents for use with the word processor. Or, alternatively, the GUI 200 could display thumbnails 270 corresponding to spreadsheet documents when used in conjunction with a spreadsheet application, for example. In an alternative embodiment, the GUI 200 could be configured to simultaneously display thumbnails 270 of related documents corresponding to two or more different computer applications while the user is engaged in viewing and/or manipulating a document of one of the computer applications. For example, the GUI 200 could simultaneously display thumbnails 270 corresponding to word processing and spreadsheet documents, which are related to the currently viewed document on the display panel 260. In this particular example, the user, while working in the word processing environment (for instance), can retrieve a related spreadsheet document from the appropriate thumbnail 270. The selection of the spreadsheet document could be, for example, to incorporate related data from the spreadsheet into the word processing document.

To determine these related documents, the present invention could be configured with an automatic content analysis procedure, which analyzes documents to determine if they are related based upon predetermined criteria. Such relatedness is determined regardless of whether or not these documents belong to the same computer application. For example, a spreadsheet document could be determined to be associated with a word processing document, as previously discussed. The methodologies used in the automatic content analysis procedure to determine the relatedness between these documents is fully disclosed in U.S. patent application Ser. No. 08/367,991, entitled "Information Evaluation", by John D. Miller, filed on Jan. 3, 1995 and U.S. patent application Ser. No. 08/884,755, entitled "Method and Apparatus for Automatically Organizing Information", also by John D. Miller, filed on Jun. 30, 1997, both applications of which are incorporated herein by reference in their entirety.

Referring back to FIG. 2A, the grouping of thumbnails 270 on each respective selection panel 220-250 (i.e., A₁-A₆, B₁-B₆, etc.) could each respectively represent documents having a different relationship to the current document displayed on the display panel 260. That is, the grouping of thumbnails 270 appearing on the selection panel 220 (i.e., A₁-A₆) could all collectively have a similar relationship to the current document displayed on the display panel 260. And, the grouping of thumbnails 270 on the selection panel 240 (i.e., C₁-C₆) could all have a similar relationship to the current document, however, different than that of the relationship between the thumbnails 270 appearing on the selection panel 220 (i.e., A₁-A₆). For example, if the GUI 200 were used in conjunction with an e-mail application, the thumbnails 270 appearing on the selection panel 220 (i.e., A₁-A₆) could all represent "received" e-mail messages; whereas, those thumbnails 270 appearing on the selection panel 240 (i.e., C₁-C₆) could all represent e-mail messages that had been "sent". The selection panels 230 and 250 could be assigned other categories relevant to the e-mail application as well. Additionally, labels could be displayed on each of the selection panels 220-250 such that the user is able to distinguish between one grouping or category of thumbnails 270 from another. For instance, in the example above, the selection panel 220 could have a label such as "In-Box" or "Received" and the selection panel 240 could be labeled "Sent". The thumbnails 270 on each of the selection panels 220-250 can be grouped or categorized according to the user's preference. The manner in which the user defines a

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specific category to a selection panel 220-250 will be fully appreciated when described in connection with the apparatus for implementing the GUI 200, appearing below.

Turning now to FIG. 3, an apparatus 300 for displaying the GUI 200 and implementing its functions is shown. The apparatus 300 comprises a processor 310 for processing a set of instructions from a storage device 320, which has a computer program stored therein. Based upon the instructions stored in the storage device 320, the processor displays the GUI 200 on the display screen 110 for visual presentation of the thumbnails 270 to the user. The processor 310 also runs various other computer applications (e.g., a word processor, web browser, e-mail, etc.). These computer applications could be stored in the storage device 320 or, alternatively, the applications may come from some other source (either internal or external to the apparatus 300).

The GUI 200 is also a computer application that is used in conjunction with these various other computer applications (e.g., wordprocessor, e-mail, etc.). When launched, the GUI 200 will essentially provide a "frame" around one of the desired computer applications such that the application itself appears on the display surface 260 of the GUI 200. For example, in the case where the application is a word processor, the word processor itself will appear on the display surface 260 of the GUI 200, and the selection panels 220-250 of the GUI 200 will effectively encapsulate or surround the word processor application.

The processor 310 further has the capability to retrieve a particular document of the selected computer application that is displayed on the display panel 260. These documents are retrieved from a document source 330, which could be embodied as a combination of various devices. For example, the document source 330 could be a disk drive for retrieving the documents from a disk, a hard disk (such as the storage device 320), a communications medium (e.g., modem, ISDN connection, etc.) for obtaining documents from other computer sources (e.g., the Internet), etc. Essentially, the document source 330 could be embodied as any known device that would permit the processor 310 to retrieve a document, whether that document resides internal or external to the apparatus 300.

The apparatus 300 further includes a user-input device 340, which permits the user to select the thumbnails 270 from the GUI 200. In the illustrated embodiment, the user-input device 340 is a computer mouse; however, it will be appreciated that the user-input device 340 can be of various other types, such as a trackball, touchpad, keyboard, touchscreen, etc. without departing from the spirit or scope of the invention. When the user desires to access a particular document, the user selects the appropriate thumbnail 270 via the user-input device 340. Such selection via the user-input device 340 subsequently causes the desired document to be displayed on the computer application appearing in the display panel 260 of the GUI 200.

The user-input device 340 can also be used to select various user preferences for personally configuring the GUI 200. That is, the user could select whether the GUI 200 appears in a two or three-dimensional configuration (as previously discussed), select the maximum number of thumbnails 270 that should appear on a particular selection panel 220-250, the physical dimensions of the selection panels 220-250, whether the thumbnails 270 should appear on the selection panels 220-250 in a single or double row/column, whether or not the selection panels 220-250 should display labels, etc. Furthermore, since there are limitations as to the number of thumbnails 270 that can be

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accommodated on a given selection panel 220-250, the GUI 200 could be configured to display a "more" button on the selection panel 220-250 to view additional thumbnails 270 for that particular panel 220-250. Additionally, due to the relative small size of the thumbnails 270, the GUI 200 could be further configured to magnify the thumbnails 270 by a predetermined magnification factor (e.g., 150%, 200%, etc.). Such magnification of the thumbnails 270 could result, for example, by merely placing the mouse pointer over the thumbnail 270. Once the mouse pointer is taken off, the thumbnail 270 would again return to its original size. The manner in which the user could define such preferences could be through a "pull down" menu, for example.

In addition to the aforementioned preferences, the user can allocate a particular category or relationship to a selection panel 220-250 by use of a "pull down" menu (as discussed above) or, alternatively, clicking a right mouse button while the mouse pointer is present on the desired selection panel 220-250. Subsequent to this latter action by the user, a menu would appear offering a variety of different categories that are appropriate to the particular computer application displayed on the display panel 260. For example, when an e-mail application appears on the display surface 260, the categories offered to the user may be "received mail", "outgoing mail", "sent mail", "drafts", etc. The user then "highlights" the desired choice and the thumbnails 270 corresponding to the chosen category would be displayed (by the processor 310) on that selection panel 220-250 of the GUI 200.

Turning now to FIG. 4, a flowchart is shown depicting a process used by the apparatus 300. Commencing at step 400, the user launches a particular computer application and retrieves a desired document. The processor 310 retrieves the desired document from the document source 330 and displays, at step 410, the document on the display panel 260 of the GUI 200. At step 420, the processor 310 further searches the document source 330 for documents that correspond to (or are relevant to) a particular category that is assigned to one of the selection panels 220-250 of the GUI 200. The manner in which the processor 310 finds these "categorized" documents could be by use of the automatic content analysis procedure (as previously mentioned). Upon determining which documents correspond to the selected category, the thumbnails 270 corresponding to such documents are displayed on their respective selection panels 220-250 of the GUI 200 at step 430. Next, at step 440, the processor 310 awaits a user input via the user-input device 340. If it is determined at step 450 that the user desires to open a new document by some conventional method (e.g., by going to the "File" menu of the application and selecting "Open", etc.), then the process reverts back to step 410 and the newly opened document is displayed as the current document. If, instead, the user has selected at step 460 one of the displayed thumbnails 270 via the user-input device 340, then the process also reverts back to step 410 where the document corresponding to the selected thumbnail 270 is retrieved by the processor 310 and displayed on the display panel 260 of the GUI 200 (i.e., the selected document now becomes the "current" document). If the user has not selected a thumbnail 270, the process continues to step 470, where it is determined whether the user desires to change any of the categories allocated to the selection panels 220-250. As previously mentioned, this could be accomplished by "right-clicking" the mouse (user-input device 340) on the desired selection panel 220-250 and selecting a desired category from a menu. If new categories are desired by the user, the process reverts back to step 420 wherein the

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processor 310 will determine which documents correspond to the newly selected category or categories. If, however, the user does not desire to change any categories assigned to the selection panels 220-250, then the process continues to step 480, where it is determined if the user desires to quit the current application. If so, the process ends, and, if not, the process reverts back to step 440 to wait for additional input by the user.

Turning now to FIG. 5, the GUI 200 is shown as being used in conjunction with the aforementioned prior art web browser 100 of FIG. 1. As depicted in FIG. 5, the web browser 100 encompasses the entire area defined by the display panel 260 of the GUI 200. The thumbnails 270 appearing on each of the selection panels 220-250 of the GUI 200 could be representative of alternative web pages for selection by the user (i.e., the thumbnail 270 is a miniaturized picture of the actual web page that it represents). Each thumbnail 270 is essentially a "link" to an alternative web page, and, when selected by the user, causes the web browser 100 to display the selected web page on the web browser's display section 130.

Each of the selection panels 220-250 can have thumbnails 270 that represent a particular relationship to the currently accessed web page that appears on the display panel 260. For example, the selection panel 220 could contain thumbnails 270 that correspond to web pages that appear further back in the web browser's URL stack; whereas the selection panel 240 could contain thumbnails 270 that correspond to web pages that appear further forward in the URL stack. Of course, as the user accesses one of these thumbnails 270 from either the "BACK" panel 220 or the "FORWARD" panel 240, the user's position in the URL stack changes. That is, some of those web pages that were "back" in the URL stack may now be "forward" on the stack (or vice versa). Accordingly, the thumbnails 270 may dynamically switch from the "BACK" panel 220 to the "FORWARD" panel 240 (or vice versa) to reflect the user's current positioning within the stack of URLs.

By displaying the thumbnails 270, the user is conveniently provided with a means to visualize the URL stack and to go directly to the desired web page (by selection of its corresponding thumbnail 270) without "blindly" stepping through a plurality of URLs to access such web page. In addition to the thumbnails 270 being grouped (or categorized) to provide a "BACK" and "FORWARD" option as described above, the thumbnails 270 could also be grouped to provide other relationships. Categories of alternative thumbnail 270 groupings could be, but not necessarily limited to:

CHILDREN	documents whose address is contained as a link on the current document.
PARENTS	documents who have links to the current document.
CO-FAVORITES	documents that have been grouped with the current page in a "favorites" folder.
SIBLINGS	documents contained in the same directory as the current document.
PEERS	documents contained on the same server as the current document.
RELATED	documents related to the current document by automatic content analysis.
GLOBAL-FAVORITES	most visited documents by the user.
MOST RECENT DOCS	documents most recently accessed by the user.

The user would be able to select and allocate a grouping or category of thumbnails 270 to a particular selection panel

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220-250 in the same manner as previously described. Additionally, to remind the user of the relationship that a particular grouping of thumbnails 270 has to the current web page, labels (e.g., "BACK", "FORWARD", left or right arrows, etc.) can be displayed on the selection panels 220-250 to visually indicate such relationships to the user.

While the present invention has been discussed primarily in connection with the prior art web browser 100 of FIG. 1, it will be appreciated that alternative types of computer applications, such as, for example, word processors, spreadsheets, database management applications, file managers, e-mail, etc., could also be used in conjunction with the GUI 200 without departing from the spirit and scope of the invention.

The particular embodiments disclosed above are illustrative only, as the invention may be modified and practiced in different but equivalent manners apparent to those skilled in the art having the benefit of the teachings herein. Furthermore, no limitations are intended to the details of construction or design herein shown, other than as described in the claims below. It is therefore evident that the particular embodiments disclosed above may be altered or modified and all such variations are considered within the scope and spirit of the invention. Accordingly, the protection sought herein is as set forth in the claims below.

What is claimed is:

1. A method comprising:

displaying a current document in a center portion of a display panel of a graphical user interface;

determining if other documents are relevant to the current document based on one or more predetermined criteria having a relationship to the current document;

displaying a graphical thumbnail representation of one or more documents having a first relationship to the current document in a first panel of a plurality of selection panels of the graphical user interface;

displaying a graphical thumbnail representation of one or more documents having a second relationship, different from the first relationship, to the current document in a second panel of the plurality of selection panels;

displaying a graphical thumbnail representation of one or more documents having a third relationship, different from the first and second relationships, to the current document in a third panel of the plurality of selection panels;

displaying a graphical thumbnail representation of one or more documents having a fourth relationship, different from the first, second and third relationships, to the current document in a fourth panel of the plurality of selection panels; and

the graphical thumbnail representations being displayed in corresponding panels located as a border about the current document on the graphical user interface and in which the graphical thumbnail representations are minuscule pictures of actual documents that the graphical thumbnail representations represent.

2. The method of claim 1, wherein the displaying the graphical thumbnail representations comprise displaying the graphical thumbnail representations contemporaneously with the current document.

3. The method of claim 1, further comprising enabling a user to select the relationships to the corresponding panels.

4. The method of claim 1, comprising enabling a user to define the one or more predetermined criteria.

5. The method of claim 1, wherein the determining comprises determining if at least one other document of a same computer application is relevant to the current document.

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6. The method of claim 1, wherein the determining comprises determining if at least one other document of a different computer application is relevant to the current document.

7. The method of claim 1, wherein the current document is associated with a web browser, an electronic mail application, a word processor, a spreadsheet application, a database application, or a file manager.

8. The method of claim 1, comprising displaying the graphical user interface to appear as a portion of a three-dimensional cuboid.

9. The method of claim 1, wherein the determining comprises determining if at least one other document is relevant to the current document using an automatic content analysis procedure.

10. The method of claim 1, comprising enabling a user to assign a category to the selection panels, wherein the first relationship corresponds to the assigned category for the first selection panel, the second relationship corresponds to the assigned category for the second selection panel, the third relationship corresponds to the assigned category for the third selection panel, and the fourth relationship corresponds to the assigned category for the fourth selection panel.

11. The method of claim 1, comprising magnifying a graphical thumbnail representation selected by a user.

12. The method of claim 1 comprising enabling a user to define one or more preferences for the graphical user interface.

13. An apparatus comprising:

a display; and

a processor coupled to display on the display a graphical user interface having a display panel and a plurality of selection panels, to display a current document in a center portion of the display panel, to determine if other documents are relevant to the current document based on one or more predetermined criteria having a relationship to the current document, to display a graphical thumbnail representation of one or more documents having a first relationship to the current document in a first panel of the plurality of selection panels, to display a graphical thumbnail representation of one or more documents having a second relationship, different from the first relationship, to the current document in a second panel of the plurality of selection panels, to display a graphical thumbnail representation of one or more documents having a third relationship, different from the first and second relationships, to the current document in a third panel of the plurality of selection panels, to display a graphic thumbnail representation of one or more documents having a fourth relationship, different from the first, second and third relationships, to the current document in a fourth panel of the plurality of selection panels, the graphical thumbnail representations being displayed in corresponding panels which are to be located as a border about the current document and the graphical thumbnail representations are to be minuscule pictures of actual documents that the graphical thumbnail representations represent.

14. The apparatus of claim 13, wherein the processor to display the graphical thumbnail representations contemporaneously with the current document.

15. The apparatus of claim 13, further comprising an input device, wherein the processor to enable a user to select a displayed graphical thumbnail representation with the input device and to display in the display panel the document corresponding to the selected graphical thumbnail representation.

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16. The apparatus of claim 15, wherein the input device comprises a mouse, trackball, touchpad, keyboard, or touchscreen.

17. The apparatus of claim 13, further comprising an input device, wherein the processor to enable a user to define the one or more predetermined criteria with the input device.

18. The apparatus of claim 13, wherein the processor to determine if at least one other document of a same computer application is relevant to the current document.

19. The apparatus of claim 13, wherein the processor to determine if at least one other document of a different computer application is relevant to the current document.

20. The apparatus of claim 13, wherein the current document is associated with a web browser, an electronic mail application, a word processor, a spreadsheet application, a database application, or a file manager.

21. The apparatus of claim 13, wherein the processor to display the graphical user interface to appear as a portion of a three-dimensional cuboid.

22. The apparatus of claim 13, wherein the processor to determine if at least one other document is relevant to the current document using an automatic content analysis procedure.

23. The apparatus of claim 13, further comprising an input device, wherein the processor to enable a user to assign a category to the selection panels with the input device and wherein the first relationship corresponds to the assigned category for the first selection panel, the second relationship corresponds to the assigned category for the second selection panel, the third relationship corresponds to the assigned category for the third selection panel and the fourth relationship corresponds to the assigned category for the fourth selection panel.

24. The apparatus of claim 13, further comprising an input device, wherein the processor to magnify a graphical thumbnail representation selected by a user with the input device.

25. The apparatus of claim 13, further comprising an input device, wherein the processor to enable a user to define one or more preferences for the graphical user interface with the input device.

26. The apparatus of claim 13, further comprising a document source, wherein the processor to query the document source to obtain one or more documents relevant to the current document.

27. The apparatus of claim 26, wherein the document source comprises a disk, a hard disk, a modem, or an Internet connection.

28. A program storage device programmed with instructions that, if executed by a machine, perform a method comprising:

displaying a current document in a center portion of a display panel of a graphical user interface;

determining if other documents are relevant to the current document based on one or more predetermined criteria having a relationship to the current document;

displaying a graphical thumbnail representation of one or more documents having a first relationship to the current document in a first panel of a plurality of selection panels of the graphical user interface;

displaying a graphical thumbnail representation of one or more documents having a second relationship, different from the first relationship, to the current document in a second panel of the plurality of selection panels;

displaying a graphical thumbnail representation of one or more documents having a third relationship, different from the first and second relationships, to the current document in a third panel of the plurality of selection panels;

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displaying a graphical thumbnail representation of one or more documents having a fourth relationship, different from the first, second and third relationships, to the current document in a fourth panel of the plurality of selection panels; and

the graphical thumbnail representations being displayed in corresponding selection panels located as a border about the current document on the graphical user interface and in which the graphical thumbnail representations are minuscule pictures of actual documents that the graphical thumbnail representations represent.

29. The program storage device of claim 28, wherein the displaying the graphical thumbnail representations comprise displaying the graphical thumbnail representation contemporaneously with the current document.

30. The program storage device of claim 28, wherein the method comprises enabling a user to select the relationships to the corresponding panels.

31. The program storage device of claim 28, wherein the method comprises enabling a user to define the one or more predetermined criteria.

32. The program storage device of claim 28, wherein the determining comprises determining if at least one other document of a same computer application is relevant to the current document.

33. The program storage device of claim 28, wherein the determining comprises determining if at least one other document of a different computer application is relevant to the current document.

34. The program storage device of claim 28, wherein the current document is associated with a web browser, an electronic mail application, a word processor, a spreadsheet application, a database application, or a file manager.

35. The program storage device of claim 28, wherein the method comprises displaying the graphical user interface to appear as a portion of a three-dimensional cuboid.

36. The program storage device of claim 28, wherein the determining comprises determining if at least one other document is relevant to the current document using an automatic content analysis procedure.

37. The program storage device of claim 28, wherein the method comprises enabling a user to assign a category to the selection panels in which the first relationship corresponds to the assigned category for the first selection panel, the second relationship corresponds to the assigned category for the second selection panel, the third relationship corresponds to the assigned category for the third selection panel, and the fourth relationship corresponds to the assigned category for the fourth selection panel.

38. The program storage device of claim 28, wherein the method comprises magnifying a graphical thumbnail representation selected by a user.

39. The program storage device of claim 28, wherein the method comprises enabling a user to define one or more preferences for the graphical user interface.

40. The method of claim 1, comprising:

displaying a new current document in the display panel; determining if one or more documents are relevant to the new current document based on the one or more predetermined criteria;

displaying a graphical thumbnail representation of one or more documents having the first relationship to the new current document in the first selection panel;

displaying a graphical thumbnail representation of one or more documents having the second relationship to the new current document in the second selection panel;

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displaying a graphical thumbnail representation of one or more documents having the third relationship to the new current document in the third selection panel; and displaying a graphical thumbnail representation of one or more documents having the fourth relationship to the new current document in the fourth selection panel.

41. The method of claim 1, comprising displaying a first label corresponding to the first relationship at the first selection panel, a second label corresponding to the second relationship at the second selection panel, a third label corresponding to the third relationship at the third selection panel and a fourth label corresponding to the fourth relationship at the fourth selection panel.

42. The apparatus of claim 13, wherein the processor to display a new current document in the display panel, to determine if one or more documents are relevant to the new current document based on the one or more predetermined criteria, to display a graphical thumbnail representation of one or more documents having the first relationship to the new current document in the first selection panel, to display a graphical thumbnail representation of one or more documents having the second relationship to the new current document in the second selection panel, to display a graphical thumbnail representation of one or more documents having the third relationship to the new current document in the third selection panel and to display a graphical thumbnail representation of one or more documents having the fourth relationship to the new current document in the fourth selection panel.

43. The apparatus of claim 13, wherein the processor to display a first label corresponding to the first relationship at the first selection panel, a second label corresponding to the second relationship at the second selection panel, a third label corresponding to the third relationship at the third selection panel and a fourth label corresponding to the fourth relationship at the fourth selection panel.

44. The program storage device of claim 28, wherein the method comprises:

displaying a new current document in the display panel; determining if one or more documents are relevant to the new current document based on the one or more predetermined criteria;

displaying a graphical thumbnail representation of one or more documents having the first relationship to the new current document in the first selection panel;

displaying a graphical thumbnail representation of one or more documents having the second relationship to the new current document in the second selection panel;

displaying a graphical thumbnail representation of one or more documents having the third relationship to the new current document in the third selection panel; and

displaying a graphical thumbnail representation of one or more documents having the fourth relationship to the new current document in the fourth selection panel.

45. The program storage device of claim 28, wherein the method comprises displaying a first label corresponding to

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the first relationship at the first selection panel, a second label corresponding to the second relationship at the second selection panel, a third label corresponding to the third relationship at the third selection panel and a fourth label corresponding to the fourth relationship at the fourth selection panel.

46. A method comprising:

displaying a current document in a center portion of a display panel of a graphical user interface;

determining if documents are relevant to the current document based on one or more predetermined criteria having a relationship to the current document;

displaying a graphical thumbnail representation of one or more documents having a first relationship to the current document in a first panel of a plurality of selection panels of the graphical user interface contemporaneously with the displayed current document along a top border of the current document;

displaying a graphical thumbnail representation of one or more documents having a second relationship, different from the first relationship, to the current document in a second panel of the plurality of selection panels contemporaneously with the displayed current document along a right-side border of the current document;

displaying a graphical thumbnail representation of one or more documents having a third relationship, different from the first and second relationship, to the current document in a third panel of the plurality of selection panels contemporaneously with the displayed current document along a bottom border of the current document;

displaying a graphical thumbnail representation of one or more documents having a fourth relationship, different from the first, second and third relationships, to the current document in a fourth panel of the plurality of selection panels contemporaneously with the displayed current document along a left-side border of the current document; and

wherein the graphical thumbnail representations are minuscule pictures of actual documents that the graphical thumbnail representations represent.

47. The method of claim 46, comprising enabling a user to define the one or more predetermined criteria.

48. The method of claim 46, comprising enabling a user to assign a category to each selection panels, wherein the first relationship corresponds to the assigned category for the first selection panel, the second relationship corresponds to the assigned category for the second selection panel, and the third relationship corresponds to the assigned category for the third selection panel, and the fourth relationship corresponds to the assigned category for the fourth selection panel.

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